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FEDERAL TRADE COMMISSION

COAL

NO. 3

REPORT NO.

COST OF PRODUCTION OF BITUMINOUS COAL  
IN OHIO, INDIANA, AND MICHIGAN

JUNE 30, 1919





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COST REPORTS

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OF THE

FEDERAL TRADE COMMISSION

COAL

No. 5

OHIO, INDIANA, AND MICHIGAN  
BITUMINOUS

JUNE 30, 1919



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**J M S**

# LETTER OF SUBMITTAL.

JUNE 30, 1919.

TO THE CONGRESS OF THE UNITED STATES:

The Federal Trade Commission herewith submits a report on the cost of producing bituminous coal in the States of Ohio, Indiana, and Michigan. This report gives cost information obtained by the Commission at the direction of the President and in aid of the United States Fuel Administration, as well as information obtained by the Commission prior to the establishment of that body. The preparation and issue of this report was authorized by resolution of the Commission on June 30, 1919, and the report is therefore issued as of that date. The compilation of the data, which were already on file, and the preparation of the report were subsequent thereto.

For the year 1918 the data herewith set forth cover the operations of 366 operators who mined about 69,000,000 net tons from 571 mines, and for the years 1916 and 1917 the operations of 87 operators who mined about 33,500,000 net tons annually.

This report is the fifth of the series on the cost of producing coal, Report No. 1 having covered the production of bituminous coal in Pennsylvania, Report No. 2 the production of anthracite coal in Pennsylvania, Report No. 3 the production of bituminous coal in Illinois, and Report No. 4 the production of bituminous coal in Alabama, Tennessee, and Kentucky. The production of Pennsylvania in 1918 formed about 30 per cent of the total annual output of bituminous coal in the United States, of Illinois about 15 per cent, of Alabama, Tennessee, and Kentucky about 10 per cent, and of Ohio, Indiana, and Michigan about 13 per cent. In Report No. 2 about 99 per cent of the entire anthracite output in the country was covered.

In this report are shown the Total F. O. B. Mine cost (with its three major subdivisions of Labor cost, Supplies cost, and General Expense, which includes Royalty and Depletion), the Sales Realization received by the operators, and the Margin between it and the Total F. O. B. Mine cost. From this Margin would have to be paid Sales Expense (where any was incurred), Interest, and Federal taxes, the remainder being available for Surplus and Dividends. All costs and sales realizations are based on tons of 2,000 pounds.

The costs and sales realizations are shown for each quarter of 1918, and the year as a whole for each of the producing districts in Ohio, Indiana, and Michigan. The producing districts are those defined by the United States Fuel Administration in its order fixing maximum prices, effective August 23, 1918, for coal mined in Ohio;

effective May 1, 1918, for coal mined in Indiana; and effective August 16, 1918, for coal mined in Michigan. The location of these districts is indicated on maps in the report. They do not correspond with the districts established by the States for the inspectors of mining conditions. All operations fully reported are shown in the following tables, and they produced about 93 per cent of the output for Ohio in 1918, 86 per cent of that for Indiana, and about 100 per cent of that for Michigan:

TABLE A.—1918 costs and sales realizations per ton for 256 operators who produced about 42,000,000 tons, or about 93 per cent of the total output in the State of Ohio.

Period, 1918.	Costs per ton.				Sales realization per ton.	Margin.
	Labor.	Supplies.	General expense.	Total f. o. b. mine.		
<b>District No. 1:</b>						
January-March .....	\$1.67	\$0.25	\$0.38	\$2.30	\$2.76	\$0.46
April-June .....	1.76	.32	.40	2.48	2.81	.33
July-September .....	1.78	.29	.35	2.42	2.81	.39
October-December .....	1.90	.40	.52	2.82	2.84	.02
Year .....	1.77	.30	.41	2.48	2.80	.32
Production for year .....	805,517 tons.					
<b>District No. 2:</b>						
January-March .....	2.07	.19	.49	2.75	3.48	.73
April-June .....	2.00	.22	.48	2.70	3.43	.73
July-September .....	2.00	.22	.42	2.64	3.43	.79
October-December .....	2.20	.31	.56	3.07	3.32	.25
Year .....	2.06	.23	.48	2.77	3.42	.65
Production for year .....	828,935 tons.					
<b>District No. 3:</b>						
January-March .....	1.41	.21	.26	1.88	2.55	.67
April-June .....	1.38	.23	.25	1.86	2.53	.67
July-September .....	1.43	.21	.24	1.88	2.62	.74
October-December .....	1.54	.27	.32	2.13	2.58	.45
Year .....	1.43	.23	.27	1.93	2.57	.64
Production for year .....	8,321,282 tons.					
<b>District No. 3a:</b>						
January-March .....	1.46	.29	.39	2.14	2.49	.35
April-June .....	1.47	.23	.41	2.11	2.54	.43
July-September .....	1.69	.32	.43	2.44	2.86	.42
October-December .....	1.70	.36	.54	2.60	2.66	.06
Year .....	1.58	.29	.44	2.31	2.64	.33
Production for year .....	275,809 tons.					
<b>District No. 4:</b>						
January-March .....	1.47	.25	.30	2.02	2.63	.61
April-June .....	1.46	.27	.30	2.03	2.61	.58
July-September .....	1.45	.23	.29	1.97	2.90	.93
October-December .....	1.58	.27	.33	2.18	2.78	.60
Year .....	1.49	.26	.30	2.05	2.74	.69
Production for year .....	2,143,230 tons.					
<b>District No. 5:</b>						
January-March .....	1.53	.19	.33	2.05	2.53	.48
April-June .....	1.54	.25	.31	2.10	2.57	.47
July-September .....	1.65	.27	.35	2.27	2.60	.33
October-December .....	1.73	.32	.41	2.46	2.58	.12
Year .....	1.61	.25	.35	2.21	2.57	.36
Production for year .....	476,862 tons.					

TABLE A.—1918 costs and sales realizations per ton for 256 operators who produced about 42,000,000 tons, or about 93 per cent of the total output in the State of Ohio—Con.

Period, 1918.	Costs per ton.				Sales realization per ton.	Margin.
	Labor.	Supplies.	General expense.	Total f. o. b. mine.		
District No. 6:						
January-March .....	\$1.64	\$0.28	\$0.30	\$2.22	\$2.94	\$0.72
April-June .....	1.63	.31	.29	2.23	2.74	.51
July-September .....	1.65	.35	.27	2.27	2.96	.69
October-December .....	1.78	.41	.34	2.53	2.91	.38
Year .....	1.67	.34	.30	2.31	2.89	.58
Production for year .....	3,872,495 tons.					
District No. 7:						
January-March .....	1.96	.28	.40	2.64	3.44	.80
April-June .....	1.95	.28	.38	2.61	3.28	.67
July-September .....	1.87	.22	.40	2.49	3.57	1.06
October-December .....	2.07	.26	.48	2.81	3.49	.68
Year .....	1.96	.26	.41	2.63	3.45	.82
Production for year .....	807,894 tons.					
District No. 8:						
January-March .....	1.28	.26	.31	1.85	2.62	.77
April-June .....	1.17	.26	.27	1.70	2.40	.70
July-September .....	1.19	.26	.28	1.73	2.51	.78
October-December .....	1.26	.32	.33	1.91	2.44	.53
Year .....	1.22	.28	.29	1.79	2.49	.70
Production for year .....	18,988,643 tons.					
District No. 9:						
January-March .....	1.35	.19	.21	1.75	2.65	.90
April-June .....	1.31	.18	.21	1.70	2.46	.76
July-September .....	1.33	.21	.20	1.74	2.66	.92
October-December .....	1.41	.25	.22	1.88	2.58	.70
Year .....	1.35	.21	.20	1.76	2.59	.83
Production for year .....	5,171,527 tons.					

TABLE B.—1918 costs and sales realizations per ton for 102 operators who produced about 26,000,000 tons, or about 86 per cent of the total output in the State of Indiana.

Period, 1918.	Costs per ton.				Sales realization per ton.	Margin.
	Labor.	Supplies.	General expense.	Total f. o. b. mine.		
District No. 1:						
January-March .....	\$1.41	\$0.20	\$0.22	\$1.83	\$2.38	\$0.55
April-June .....	1.39	.20	.23	1.82	2.35	.53
July-September .....	1.41	.19	.23	1.83	2.31	.48
October-December .....	1.47	.24	.26	1.97	2.28	.31
Year .....	1.42	.21	.23	1.86	2.33	.47
Production for year .....	25,179,012 tons.					
Brazil Block District:						
January-March .....	1.79	.27	.40	2.46	3.06	.60
April-June .....	1.74	.20	.41	2.35	3.04	.69
July-September .....	1.89	.26	.41	2.56	3.13	.57
October-December .....	2.11	.39	.53	3.03	3.09	.06
Year .....	1.87	.27	.43	2.57	3.06	.51
Production for year .....	653,739 tons.					



TABLE C.—1918 costs and sales realizations per ton for 8 operators who produced about 1,400,000 tons annually, or about all of the output of the State of Michigan.

Period, 1918.	Costs per ton.				Sales realization per ton.	Margin.
	Labor.	Supplies.	General expense.	Total f. o. b. mine.		
January-March.....	\$2.69	\$0.41	\$0.32	\$3.42	\$3.93	\$0.51
April-June.....	2.42	.51	.32	3.25	4.02	.77
July-September.....	2.49	.58	.30	3.37	4.09	.72
October-December.....	2.62	.64	.33	3.59	4.01	.42
Year.....	2.56	.54	.31	3.41	4.02	.61
Production for year.....	1,417,387 tons.					

For this production of about 69,000,000 tons, the average annual total f. o. b. mining costs ranged by districts from \$1.76 to \$3.41, and the average sales realization \$2.33 to \$4.02 per ton.

Returns were received also for a less period than 12 months from 94 operators in the various districts who had an estimated total annual production of about 5,000,000 tons. Examination of such returns shows that had it been possible to secure reports for the whole 12 months, the annual averages shown in the foregoing table would not be changed more than 1 or 2 cents per ton, if at all. Including these mines, the production fully or partially reported covered about 94 per cent of the 1918 output.

An analysis made for each district brings out clearly the lower cost of production of the thicker seams mined, particularly in the item of labor. This has an important bearing in forecasting the effect which a change in the wage scale has on the cost of mines operating in seams of different thicknesses in a given field.

Average costs and sales realizations of 87 operators in Ohio, Indiana, and Michigan, mining about 33,500,000 tons annually are shown below for various significant periods between January 1, 1916, and December 31, 1918. The periods are so selected as to make possible the analyses of the effects brought about through various changes in the wage scales, and in established maximum prices. They are not necessarily uniform for the different districts.

TABLE D.—"Revised" costs and sales realizations per ton of 46 operators who produced about 18,000,000 tons annually in Districts Nos. 2, 3, 4, 5 and 9 (combined), 6, 7, and 8 of Ohio during 1916-1918.

Period.	Costs per ton.				Sales realization per ton.	Margin per ton.
	Labor.	Supplies.	General expense.	Total f. o. b. mine.		
<b>District No. 2:</b>						
Year 1916.....	\$1.19	\$0.14	\$0.29	\$1.62	\$1.79	\$0.17
January-March, 1917.....	1.28	.16	.20	1.71	2.72	1.01
April-August, 1917.....	1.64	.27	.33	2.24	2.85	.61
September-October, 1917.....	1.81	.15	.20	2.25	2.70	.35
November, 1917-January, 1918.....	2.32	.23	.48	3.03	3.66	.63
February-March, 1918.....	2.24	.16	.51	2.91	3.84	.93
April-May, 1918.....	2.19	.24	.51	2.94	3.53	.59
June, 1918.....	2.32	.25	.49	3.06	3.55	.49
July-August, 1918.....	2.16	.27	.28	2.81	3.46	.65
September-December, 1918.....	2.28	.27	.48	3.04	3.47	.46
<b>District No. 3:</b>						
Year 1916.....	.84	.11	.22	1.17	1.38	.21
January-March, 1917.....	.89	.11	.19	1.19	2.12	.93
April-August, 1917.....	1.04	.15	.22	1.41	2.34	.93
September-October, 1917.....	1.15	.23	.24	1.62	2.34	.72
November, 1917-March, 1918.....	1.51	.26	.28	2.05	2.52	.47
April-May, 1918.....	1.42	.25	.27	1.94	2.57	.63
June, 1918.....	1.46	.26	.26	1.98	2.51	.53
July-August, 1918.....	1.45	.24	.24	1.93	2.62	.69
September-December, 1918.....	1.54	.30	.31	2.15	2.57	.42
<b>District No. 4:</b>						
Year 1916.....	.93	.15	.12	1.20	1.51	.31
January-March, 1917.....	.86	.15	.12	1.15	2.81	1.66
April-August, 1917.....	1.04	.23	.12	1.39	2.38	.99
September-October, 1917.....	1.11	.27	.12	1.50	2.34	.84
November, 1917-March, 1918.....	1.45	.29	.19	1.92	2.62	.69
April-May, 1918.....	1.45	.24	.21	1.90	2.56	.66
June, 1918.....	1.51	.25	.18	1.94	2.67	.73
July-August, 1918.....	1.45	.23	.19	1.87	2.99	1.12
September-December, 1918.....	1.52	.28	.21	2.01	2.89	.88
<b>Districts Nos. 5 and 9 (combined):</b>						
Year 1916.....	.80	.08	.12	1.00	1.21	.21
January-March, 1917.....	.86	.10	.13	1.09	1.91	.82
April-August, 1917.....	1.01	.13	.16	1.30	2.63	1.33
September-October, 1917.....	1.02	.18	.22	1.42	2.06	1.24
November, 1917-March, 1918.....	1.34	.20	.22	1.76	2.70	.94
April-May, 1918.....	1.29	.17	.18	1.64	2.46	.82
June, 1918.....	1.35	.20	.20	1.75	2.44	.69
July-August, 1918.....	1.31	.20	.18	1.69	2.69	1.00
September-December, 1918.....	1.37	.24	.20	1.81	2.58	.77
<b>District No. 6:</b>						
Year 1916.....	.93	.11	.17	1.21	1.51	.30
January-March, 1917.....	.99	.15	.18	1.32	2.47	1.15
April-August, 1917.....	1.16	.23	.20	1.59	3.02	1.43
September-October, 1917.....	1.23	.38	.29	1.90	2.85	1.03
November, 1917-March, 1918.....	1.55	.34	.25	2.15	3.01	.86
April-May, 1918.....	1.52	.30	.24	2.06	2.77	.71
June, 1918.....	1.52	.34	.23	2.09	2.71	.62
July-August, 1918.....	1.51	.36	.23	2.10	3.00	.90
September-December, 1918.....	1.63	.45	.29	2.37	2.94	.57
<b>District No. 7:</b>						
Year 1916.....	1.12	.09	.23	1.44	1.78	.34
January-March, 1917.....	1.19	.14	.24	1.57	2.76	1.19
April-August, 1917.....	1.31	.16	.29	1.76	3.18	1.42
September-October, 1917.....	1.37	.26	.48	2.11	2.94	.83
November, 1917-January, 1918.....	1.73	.30	.49	2.52	3.33	.81
February-March, 1918.....	1.66	.37	.36	2.39	3.22	.83
April-May, 1918.....	1.65	.24	.32	2.21	3.01	.80
June, 1918.....	1.68	.22	.39	2.29	3.04	.75
July-August, 1918.....	1.58	.15	.37	2.10	3.46	1.36
September-December, 1918.....	1.82	.20	.42	2.44	3.42	.98
<b>District No. 8:</b>						
Year 1916.....	.78	.10	.14	1.02	1.32	.30
January-March, 1917.....	.84	.14	.16	1.14	2.18	1.06
April-August, 1917.....	.95	.17	.19	1.31	2.49	1.18
September-October, 1917.....	.99	.19	.24	1.42	2.55	1.13
November, 1917-March, 1918.....	1.27	.27	.27	1.81	2.57	.76
April-May, 1918.....	1.22	.28	.22	1.72	2.41	.69
June, 1918.....	1.23	.26	.23	1.72	2.38	.66
July-December, 1918.....	1.26	.27	.24	1.77	2.44	.67

TABLE E.—“Revised” costs and sales realizations per ton of 37 operators who produced about 14,300,000 tons annually in District No. 1 and Brazil Block District of Indiana during 1916–1918.

Period.	Costs per ton.				Sales realization per ton.	Margin per ton.
	Labor.	Supplies.	General expense.	Total f. o. b. mine.		
<b>District No. 1:</b>						
April-October, 1916.....	\$0.88	\$0.08	\$0.15	\$1.11	\$1.18	\$0.07
November, 1916-March, 1917.....	.86	.09	.12	1.07	1.09	.02
April-May, 1917.....	1.02	.12	.16	1.30	1.88	.58
August, 1917.....	1.11	.14	.16	1.41	2.10	.69
September-October, 1917.....	1.13	.16	.16	1.45	2.02	.57
November, 1917-March, 1918.....	1.39	.20	.19	1.78	2.37	.59
April, 1918.....	1.39	.24	.21	1.84	2.40	.56
May, 1918.....	1.39	.18	.21	1.78	2.36	.58
June-December, 1918.....	1.43	.22	.22	1.87	2.30	.43
<b>Brazil Block District:</b>						
Year 1916.....	1.52	.16	.31	1.99	2.10	.11
January-March, 1917.....	1.48	.15	.24	1.87	2.80	.93
April-August, 1917.....	1.75	.18	.27	2.20	3.04	.84
September, 1917.....	1.71	.14	.25	2.10	2.73	.63
October, 1917.....	1.72	.16	.24	2.12	2.80	.68
November, 1917-March, 1918.....	2.17	.22	.28	2.67	3.23	.56
April, 1918.....	2.22	.25	.31	2.78	3.15	.37
May, 1918.....	2.13	.14	.29	2.56	3.37	.81
June-December, 1918.....	2.28	.21	.34	2.83	3.30	.47

TABLE F.—“Revised” costs and sales realizations per ton of 4 operators who produced about 1,200,000 tons annually in the State of Michigan during 1916–1918.

Period.	Costs per ton.				Sales realization per ton.	Margin per ton.
	Labor.	Supplies.	General expense.	Total f. o. b. mine.		
July-October, 1916.....	\$1.62	\$0.25	\$0.28	\$2.15	\$2.30	\$0.15
November, 1916-March, 1917.....	1.56	.25	.28	2.09	3.00	.91
April-October, 1917.....	1.95	.25	.36	2.56	3.28	.72
November, 1917.....	2.57	.25	.39	3.21	4.14	.93
December, 1917-March, 1918.....	2.64	.36	.34	3.34	3.92	.58
April-May, 1918.....	2.42	.50	.33	3.25	3.99	.74
June-August, 1918.....	2.39	.59	.28	3.26	4.01	.75
September-December, 1918.....	2.54	.64	.30	3.48	3.99	.51

The labor costs in 1918 in the districts shown above were from 48 to 88 per cent higher and the total f. o. b. mine costs in 1918 were from 39 to 82 per cent higher than those in 1916. The sales realizations in 1918 were from 53 to 114 per cent higher than those in 1916.

Of the amount paid for coal by the purchaser, based on each dollar of sales realizations during 1916–1918, the item of most general interest is the proportion which labor received. That part of the amount paid by the purchaser which went to labor varied considerably from district to district, and, in most districts, from period to period. It was highest (74 cents out of each dollar) in District No. 1 of Indiana during the period April–October, 1916, and lowest (31 cents out of each dollar) in District No. 4 of Ohio during the period January–March, 1917.

A comparison of the rate of production per month and margins per ton for three periods during 1917–1918 follows:

TABLE G.—Average monthly output and average margin per ton, 1917–1918, of 87 operators producing about 33,500,000 tons annually for period preceding any governmental price control over output, period of governmental price control over part of output, and period of governmental price control over practically entire output.

	January–August, 1917.		September, 1917–March, 1918.		April–December, 1918.	
	Average monthly output.	Margin per ton.	Average monthly output.	Margin per ton.	Average monthly output.	Margin per ton.
Ohio:	<i>Tons.</i>		<i>Tons.</i>		<i>Tons.</i>	
District No. 2.....	21, 208	\$0.79	17, 688	\$0.63	20, 161	\$0.54
District No. 3.....	256, 215	.93	224, 767	.55	231, 526	.55
District No. 4.....	56, 332	1.21	49, 501	.75	47, 642	.87
Districts Nos. 5 and 9 (combined).....	379, 263	1.15	356, 781	1.03	415, 326	.88
District No. 6.....	148, 299	1.32	144, 658	.91	155, 870	.70
District No. 7.....	31, 747	1.33	33, 142	.82	33, 528	1.03
District No. 8.....	612, 635	1.14	597, 909	.88	716, 189	.87
Indiana:						
District No. 1.....	1, 218, 014	.64	1, 359, 806	.59	1, 383, 166	.45
Brazil Block District.....	25, 086	.88	26, 301	.58	23, 594	.51
Michigan.....	97, 020	.81	96, 436	.69	104, 453	.65

It will be seen that in some instances an increase in production does not necessarily accompany an increase of margin, nor does a decrease in margin necessarily involve a decrease in production. The foregoing facts indicate clearly that the margin is but one of several factors which may stimulate or retard production. Production was also influenced by such conditions as strikes or other forms of labor shortage, transportation facilities, and the demand for coal in the markets available to the mines, etc. Explanations for the rise or fall of production are to be found in the particular conditions which existed during each period in each district.

Representative figures prior to August, 1917, were not obtained for operators in Districts Nos. 1 and 3a in Ohio. In the report, however, are shown for various significant periods the total f. o. b. mine costs and sales realizations of operators who produced about 80 to 90 per cent of the output in these two districts, from August, 1917, through December, 1918.

As was pointed out in the previous reports on the production of bituminous coal, caution should be used in drawing deductions for the industry as a whole based on the 1918 costs, sales realizations, and margins, shown for the several Ohio, Indiana, and Michigan districts in this report. Conditions in the different fields in the country varied widely in 1918.

Respectfully,

WILLIAM B. COLVER, *Chairman.*

JOHN FRANKLIN FORT.

VICTOR MURDOCK.

HUSTON THOMPSON.



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**CHAPTER I.**

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**INTRODUCTION.**

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## CHAPTER I.—INTRODUCTION.

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### 1. Character of Cost Information now Published by the Commission.

The cost information herein published by the Commission for the period from August, 1917, to December, 1918, is based upon the monthly reports made by the operators on the detailed cost forms prescribed by the Commission. Prior to August, 1917, it is based either on costs which were submitted by the operators in support of applications for revision of official selling prices, or on costs which were obtained directly from the operators' books by the Commission's agents.

In this report the cost information is of two kinds: "Claimed" costs and "Revised" costs. The "Claimed" costs are compiled from the original figures which appear on the operators' reports. The "Revised" costs are compiled from such reports, after the "Claimed" costs were revised by the accounting staff of the Commission, in order to readjust monthly costs and to eliminate obviously inflated costs. As examples of the first kind of revision may be mentioned the prorating, over several months, of payments for supplies, insurance, taxes, etc., made in some one month, but which apply to several months' operations. There were also a few instances of obviously inflated costs. Most of the gross inflations of this kind on the monthly cost reports were readily detected through the comparison of the costs of such operators, either with their own previously reported costs, or with costs of other operators in the same field operating under similar conditions. In all cases the operator was given opportunity to furnish a supplementary statement, showing the principal items making up the cost figure which was questioned, and on the basis of such detailed information the revision was then made by the Commission's accountants.

As examples of the detail which the operators furnished in such supporting statements may be mentioned the following: Under Labor and Supplies the operator listed in detail the principal items making up the (specified) amount entered on his cost report on a (specified) line, and was called upon to explain fully the reason for any unusual or large expenditures incurred in connection therewith. In the case of royalties, of depletion, and of depreciation, the operator, through

the answers to many detailed questions, showed the basis of such charges. In the case of officers' salaries and expenses the operator gave name and title of each officer, and stated separately his salary and his expenses paid during each of the years 1915, 1916, 1917, and 1918. The Commission required all of these supplementary statements to be indorsed "Approved and certified correct" over the signature of an officer of the concern.

It is with full appreciation of the patient cooperation of the great majority of operators, the honesty and the accuracy of whose cost reports are not open to question, that the Commission is able to point out that the costs of from 90 to 95 per cent of the tonnage reported were as a rule accepted as substantially correct. Certain revisions were found necessary, however, and while generally they operated to reduce costs, in some instances they increased them. As will be seen from an examination of the tables appearing in this report, showing a comparison of "Claimed" and "Revised" costs, the revision made by the Commission had little appreciable effect on the costs shown. Most of the revision occurs under "General Expense," where most of the inflation was found to have taken place.

The information obtained shows minor subdivisions of cost, but the summaries published in this report are (1) the cost of the labor, (2) the cost of supplies, and (3) the general expense (or overhead) involved in mining the coal, bringing it to the surface, preparing it for market, and placing it in railroad cars for shipment. The total of these three costs is (4) the f. o. b. mine cost, shown by the Commission. All costs and sales realizations shown in this Report are based on tons of 2,000 pounds.

There are other factors than those enumerated above, which are matters to be taken into consideration in *price* determination, but which are not definitely ascertainable from the monthly cost reports. They are largely matters either of a study of the investment or of expert and professional judgment. The Federal Trade Commission has not yet undertaken, on an adequate scale, a study of the investment.

The costs shown by the Federal Trade Commission are not intended to include any of the following items: Reserves for uninsurable hazards; such as mine fires, floods, cave-ins, squeezes, strikes or other similar causes contributing to destruction of property and idleness at the mines; extra cost development work done during the war and involving an increased risk in the recovery of the capital under a normal régime of prices of coal; selling expense, where a selling organization, other than the mine office force, is maintained in order to market the product; interest on the investment, including borrowed

capital; allowances for income and excess-profits taxes; profit on the investment.

In its revision of the costs as reported by the operators, the Commission has endeavored to exclude all allowances for the foregoing items. The inclusion of such items by operators in the "Claimed" costs is the main reason for the differences shown between "Claimed" and "Revised" costs. The Commission considers that allowances of the nature above described should be taken care of in the "Margins," that is, the difference between the f. o. b. mine cost of the coal and the amount received for it by the operator from the purchaser.

## **2. Nature of Sales Realizations and Margins.**

The figures for "Sales Realization" were obtained by dividing the tonnage of coal sold, into the total amount received from its sale. Purchased coal and coal used at the power plants have been excluded from these figures. The difference between the sales realization per ton and the f. o. b. mine cost per ton is the "Margin." This "Margin" must not be confused with what is often called profit. Selling expense, interest, income and excess profits taxes, as well as other items, must be deducted from it before the net profit from the operation available for dividends or surplus can be determined. The margin necessary to a profitable operation varies greatly from operator to operator. One operator may have a heavy investment in mining machinery per ton of product, and thus show a relatively low labor cost, while another operator may have a small investment, but a high labor cost. In the case of the first operator, the margin obtained should be larger in order to give an equal rate of remuneration to the larger amount of invested capital per ton of product.

## **3. Character of the Consumption of Ohio, Indiana, and Michigan Coal.**

As is the case in many of the coal fields west of the Middle Atlantic States, a considerable portion of the output of bituminous coal in Ohio, Indiana and Michigan goes into domestic consumption. The proportion thus used varies from district to district, and is influenced partly by the nature of the coal, partly by the availability of substitutes, and partly by the extent of preparation given the coal for the purpose of adapting it to domestic use.

The exact extent to which the coal from these States enters into domestic use is not definitely ascertainable from any figures at present available. In the 1915 report of the United States Geological Survey<sup>1</sup> some statistics of the distribution of bituminous coal by classes of consumers, for Ohio, Indiana, and Michigan, are shown.

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<sup>1</sup> Mineral Resources of the United States, 1915. Part II, pp. 471-472.

From these the percentages of consumption shown in the following statement have been compiled:

Class of consumer.	Ohio.	Indiana.	Michigan.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Railroad.....	36.6	36.5	34.2
Steamship bunker.....	1.0		
Gas.....		.1	
Domestic and small steam trade.....	17.8	16.4	43.3
Industrial steam trade.....	39.6	44.4	19.5
Exports.....	3.0		
Mine fuel.....	2.0	2.6	3.0
Total output (tons).....	22,434,691	17,006,152	1,156,138

The following statistics of distribution of shipments of bituminous coal, by classes of consignees, August 3, 1918, to February 1, 1919, are taken from an unpublished manuscript of the Geological Survey, and are published by permission of that Bureau:

Class of consumer.	Ohio.		Indiana.	Michigan.
	Northern.	Southern.		
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Railroad fuel.....	26.9	24.0	31.4	19.3
Lake.....	27.3	27.0		
United States Government.....	.1	1.3	.8	.6
State and county institutions.....	.3	1.6	1.2	.9
Public utilities, gas and electric.....	7.3	6.1	11.0	5.1
Retail dealers.....	10.4	20.9	20.6	31.0
Industries, including iron and steel.....	27.7	19.1	35.0	43.1

This use of coal for domestic consumption introduces, to a greater or less extent, changes in the character of the seasonal demand. In Report No. 2, on Pennsylvania anthracite, the Commission pointed out the wide differences between the character of the demand for coal for domestic consumption and the demand for industrial use. If the coal is of a nature which can be stored without undue fire risk, and if the domestic consumer can be induced to buy his coal during the summer, the domestic demand has a less seasonal character than where such conditions do not exist. Despite the marked seasonal fluctuations, the annual domestic demand is likely to be a fairly constant quantity from year to year. On the other hand, the industrial demand for coal, while not always subject to such extreme seasonal fluctuations as that of coal for domestic use, is likely to vary to a much greater extent from year to year, influenced as it is primarily by periods of industrial prosperity or depression.

#### 4. Differences in Costs Between Mines.

One of the most striking facts brought out in the statistics presented by the Commission is the great differences in costs between operators mining coal in the same field. There are many causes for

these differences. The principal causes may be briefly stated as follows:

1. If mines are not under the same management part of the difference may be due to respective efficiency of the managements.

2. Physical conditions affecting cost may be widely different in respect to—

- (a) Thickness of seam.
- (b) Pitch of seam.
- (c) Purity of coal in seam; freedom from foreign bodies, such as slate, sulphur balls, flinty nodules, etc.
- (d) Relative hardness of coal.
- (e) Faults and irregularities of seam.
- (f) Character of top and bottom as determining amount of timbering.
- (g) Character of operation, whether shaft or drift, amount of stripping, and distance of productive coal seams from surface.
- (h) Drainage necessary for mine.
- (i) Ventilation necessary for mine.
- (j) Age of mine and character of mining, whether advancing rooms or robbing pillars.
- (k) Necessity of measures to prevent cave-ins of surface, subsequent to removal of coal.

3. Lost time due to—

- (a) Car shortage.
- (b) Accidents to mine.
- (c) Lack of sufficient labor.

4. Variations in payments for royalties and in the amounts of depletion, depreciation charges, and officers' salaries.

5. Differences in the use of labor-saving machinery (such as mining machines, electrical haulage, etc.).

6. Differences in the amount of preparation given the coal for market.

Of the foregoing causes of differences in cost of production, probably the most important one is the thickness of seam mined. As a general rule, it may be stated that until a certain thickness is reached the cost of mining decreases as the thickness of the seam increases. After it reaches a certain point (which will vary from field to field) the costs are likely to increase, due to the larger amount of timbering required.

It may be pointed out that, while as a general rule, labor costs and total f. o. b. mine costs in any given field will decrease as the seam thickness, this will not be found to apply in every case. It is believed, however, that such variations are due largely to exceptional conditions which obscure the effect of the general factor of thickness of seam.



The importance of the factor of thickness of seam is always recognized in the mining rates paid by the operator. It has also a most important bearing on the differences in the increase of labor cost per ton between the different mines, which results from the application of a uniform advance in the wage scale to the different conditions at the various mines. Thus the uniform increase in the wage scale which took place at most of the mines in the country in November, 1917, resulted in an increase of labor cost per ton, varying from less than 25 cents per ton at some mines to over 70 cents per ton at others. These facts were clearly brought out through a comparison of the monthly cost reports for August, September, and October, 1917, the three months prior to the wage increase, with those for November and December, 1917, the two months subsequent to the increase.

The Commission has collected much definite and detailed information bearing on the connection between advances in the general wage scale and the changes in labor cost of the different classes of operations. It hopes to be able to make this public at some future date. At the present time, however, merely the general facts can be shown.

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**CHAPTER II.**

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**OHIO.**

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## CHAPTER II.—OHIO

### Part I.—INTRODUCTION.

#### 1. Definition of the Various Producing Districts or Fields.

The distribution of output between the various coal-producing districts in Ohio has been made in accordance with the areas of those districts, as defined by the Fuel Administration in its order fixing prices in the State, effective August 23, 1918, and as amended for Wheeling and Liberty Townships in the county of Guernsey, by the order effective November 19, 1918. The area comprised in the different districts is as follows:

District No. 1, to wit: The county of Meigs and the townships of Cheshire and Addison in the county of Gallia.

District No. 2, to wit: The counties of Vinton, Jackson, Lawrence, Scioto, Pike, and the county of Gallia except the townships of Cheshire and Addison.

District No. 3,<sup>1</sup> to wit: The counties of Hocking and Athens, and the townships of Coal and Monroe in the county of Perry and the township of Homer in the county of Morgan.

District No. 3a,<sup>1</sup> to wit: The Bailey Run or No. 7 seam.

District No. 4, to wit: The counties of Washington and Noble, the county of Morgan except the township of Homer, and the county of Perry except the townships of Coal and Monroe.

District No. 5, to wit: The county of Muskingum.

District No. 6, to wit: The counties of Holmes, Tuscarawas, Carroll, Coshocton, and the townships of Monroe, Franklin, Washington, and Freeport in the county of Harrison, and the townships of Washington and Yellow Creek in the county of Columbiana, and the townships of Brush Creek, Saline, Springfield, Ross, and Knox in the county of Jefferson, and operations in the 8-A vein in Flushing and Union Townships in the county of Belmont, and the townships of Wheeling and Liberty in the county of Guernsey.

District No. 7, to wit: The counties of Trumbull, Portage, Summit, Mahoning, Medina, Wayne, and Stark, and the county of Columbiana except the townships of Washington and Yellow Creek.

District No. 8, to wit: The county of Monroe, the county of Belmont except the township of Warren and operations in the 8-A vein in Flushing and Union Townships, the county of Harrison except the townships of Monroe, Franklin, Washington, and Freeport, and the county of Jefferson except the townships of Brush Creek, Saline, Ross, Knox, and Springfield.

District No. 9, to wit: The county of Guernsey except the townships of Wheeling and Liberty, and the township of Warren in Belmont County.

The location of these districts is shown on the map of Ohio (opposite p. 34).

<sup>1</sup> In the order of Aug. 23, 1918, the Bailey Run or No. 7 seam, although defined as in District No. 3, was given prices 40 cents above those for the rest of the district. The output of the Bailey Run or No. 7 seam has therefore been shown in this report as District No. 3a.

## 2. General Statistics of Output.

The statistics in this section for coal produced in Ohio have been compiled from reports published by the United States Geological Survey.

The proportion which the output of Ohio has formed of the total bituminous coal output of the United States is as follows:

	Per cent.		Per cent.
1911.....	7.6	1915.....	5.1
1912.....	7.7	1916.....	6.9
1913.....	7.6	1917.....	7.4
1914.....	4.5	1918.....	7.9

Since the Geological Survey statistics are shown by counties and the State as a whole, the tonnage produced in counties which lie in more than one of the producing districts, as described above, has been allocated to the different districts in the proportions of the tonnage of those counties as shown in operator's reports to the Commission for 1918. The following statement shows the proportions which the output of the various districts form of the State total:

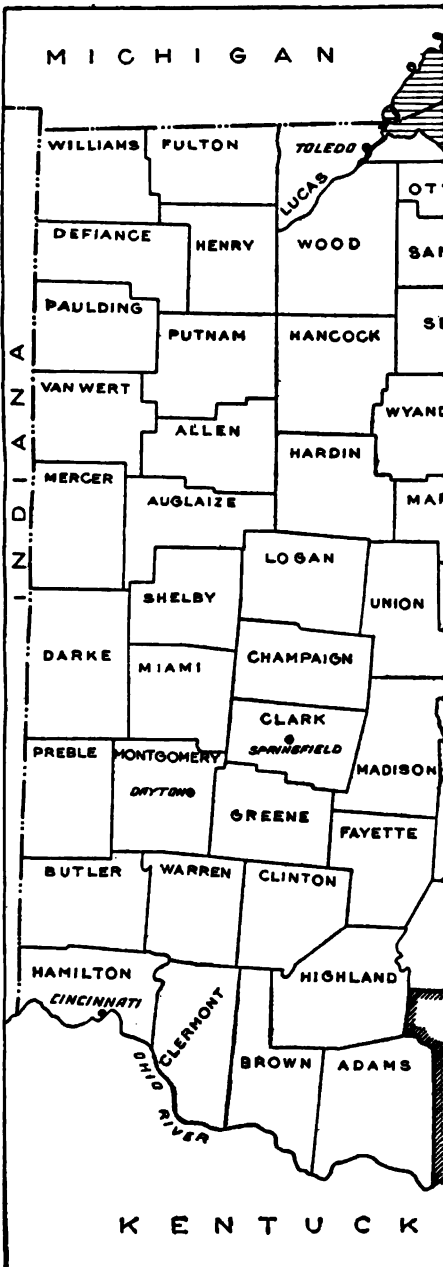
Year.	Production.	Proportion of total produced in each district.									
		No. 1.	No. 2.	No. 3.	No. 3a.	No. 4.	No. 5.	No. 6.	No. 7.	No. 8.	No. 9.
		Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
1911.....	30,759,996	2	3	21	1	6	1	8	4	41	13
1912.....	31,528,727	2	3	21	1	6	1	9	3	42	12
1913.....	36,200,527	2	2	20	1	7	1	9	3	43	12
1914.....	19,843,115	3	4	26	1	7	2	10	5	26	16
1915.....	22,434,691	4	4	19	1	6	2	12	4	34	14
1916.....	34,728,219	3	3	16	1	5	1	10	3	46	12
1917.....	49,748,734	3	3	22	1	6	1	9	3	42	10

The United States Geological Survey has collected information on the "average value per ton" for a long series of years. This average is obtained by dividing the total selling value by the total tonnage.<sup>1</sup> The following table shows this information for 1911-1917, that for the districts having been compiled from the Survey county figures, by the method outlined above:

<sup>1</sup> The value of coal given in this report is the realization value at the mine f. o. b. cars, and the average value per ton is the average realization price obtained by dividing the total value by the number of tons sold or produced. The coal used at the mine, the coal coked by the producing company, and the coal used in some other industry by the company operating the mine—an appreciable proportion of the whole—is never sold, and the value placed upon it is either an estimate or the figure at which it is carried on the books, either of which is supposedly based on what the coal would have brought if sold or what other fuel for the respective purpose would have cost if its purchase had been necessary. In other words, the values given represent returns to the operators for coal sold, plus estimated exchange value of that not sold. These figures do not necessarily show prices or even an average of the prices of coal at the mine. U. S. Geological Survey. (Mineral Resources of the United States, 1917. Pt. II, p. 932.)

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TABLE 1.—*Production and average value, 1911-1917, by producing districts and State of Ohio.*

Year.	District No. 1.		District No. 2.		District No. 3.	
	Production.	Average value per ton.	Production.	Average value per ton.	Production.	Average value per ton.
	<i>Tons.</i>		<i>Tons.</i>		<i>Tons.</i>	
1911.....	527,650	\$1.13	838,412	\$1.64	6,482,153	\$1.08
1912.....	736,038	1.24	910,920	1.58	7,194,617	1.11
1913.....	654,535	1.26	868,667	1.46	7,245,104	1.12
1914.....	542,324	1.11	782,924	1.46	4,887,977	1.12
1915.....	947,827	1.06	799,439	1.41	4,180,612	1.07
1916.....	1,618,280	1.44	986,458	1.64	5,512,100	1.35
1917.....	1,184,067	2.92	1,285,004	2.66	8,797,750	2.38

Year.	District No. 3a.		District No. 4.		District No. 5.	
	Production.	Average value per ton.	Production.	Average value per ton.	Production.	Average value per ton.
	<i>Tons.</i>		<i>Tons.</i>		<i>Tons.</i>	
1911.....	320,966	\$1.08	1,940,331	\$1.05	376,446	\$1.04
1912.....	361,459	1.10	2,148,617	1.09	465,629	1.07
1913.....	371,221	1.12	2,416,712	1.12	472,748	1.09
1914.....	248,960	1.12	1,432,423	1.11	328,329	1.12
1915.....	299,863	1.07	1,468,896	1.08	396,986	1.07
1916.....	282,827	1.34	1,927,787	1.31	376,286	1.23
1917.....	453,966	2.35	2,704,179	2.43	476,812	2.17

Year.	District No. 6.		District No. 7.		District No. 8.	
	Production.	Average value per ton.	Production.	Average value per ton.	Production.	Average value per ton.
	<i>Tons.</i>		<i>Tons.</i>		<i>Tons.</i>	
1911.....	2,428,311	\$1.07	1,357,285	\$1.47	12,592,739	\$0.95
1912.....	3,077,609	1.12	1,166,954	1.69	14,276,929	1.99
1913.....	3,296,110	1.14	1,033,482	1.59	15,495,536	1.96
1914.....	1,821,335	1.16	913,266	1.55	4,948,033	1.07
1915.....	2,760,969	1.11	911,978	1.53	7,620,366	1.03
1916.....	3,330,960	1.40	959,094	1.92	15,949,386	1.27
1917.....	3,731,277	2.66	1,041,036	2.92	17,124,514	2.46

Year.	District No. 9.		State.	
	Production.	Average value per ton.	Production.	Average value per ton.
	<i>Tons.</i>		<i>Tons.</i>	
1911.....	3,895,682	\$0.92	30,759,966	\$1.03
1912.....	4,246,955	.98	34,528,727	1.07
1913.....	4,321,992	1.02	36,200,527	1.10
1914.....	2,636,707	1.01	18,843,115	1.13
1915.....	3,232,961	.99	22,434,601	1.08
1916.....	4,386,161	1.25	34,728,219	1.33
1917.....	3,949,852	2.41	40,748,734	2.48

In its reports for 1916 and 1917 the Geological Survey published "average values" in more detail than in previous reports. The table following is compiled from statistics appearing in the 1916 and 1917 reports.



TABLE 2.—Disposition of product, and average values, by producing districts and State of Ohio, 1916–1917.

Districts.	Loaded at mines for shipment.				Sold to local trade and used by employees.			
	1916		1917		1916		1917	
	Production.	Average value per ton.	Production.	Average value per ton.	Production.	Average value per ton.	Production.	Average value per ton.
	<i>Tons.</i>		<i>Tons.</i>		<i>Tons.</i>		<i>Tons.</i>	
No. 1.....	962,715	\$1.46	1,122,349	\$2.92	43,508	\$1.10	45,926	\$2.95
No. 2.....	764,428	1.75	1,037,808	2.72	180,744	1.29	186,696	2.05
No. 3.....	5,189,460	1.35	8,339,673	2.40	233,243	1.47	306,125	2.09
No. 3a.....	272,164	1.35	438,339	2.37	5,975	1.28	7,004	2.06
No. 4.....	1,862,972	1.32	2,602,222	2.45	27,073	1.27	50,197	1.87
No. 5.....	325,545	1.19	372,773	2.20	49,039	1.49	97,113	2.00
No. 6.....	2,857,548	1.41	3,204,129	2.71	406,741	1.36	435,075	2.31
No. 7.....	709,309	1.99	726,219	3.01	202,509	1.76	277,349	2.82
No. 8.....	14,804,987	1.27	15,824,184	2.49	930,513	1.30	1,073,283	1.93
No. 9.....	4,246,785	1.25	3,794,783	2.42	44,333	1.19	56,586	2.18
Total State...	31,995,913	1.33	37,462,479	2.51	2,123,678	1.37	2,534,344	2.15

Districts.	Used at mines for steam and heat.				Total.			
	1916		1917		1916		1917	
	Production.	Average value per ton.	Production.	Average value per ton.	Production.	Average value per ton.	Production.	Average value per ton.
	<i>Tons.</i>		<i>Tons.</i>		<i>Tons.</i>		<i>Tons.</i>	
No. 1.....	12,037	\$1.08	15,782	\$2.59	1,018,260	\$1.44	1,184,057	\$2.92
No. 2.....	40,286	1.20	60,597	2.38	985,458	1.64	1,285,091	2.60
No. 3.....	89,397	.99	152,952	1.68	5,512,100	1.35	8,797,750	2.38
No. 3a.....	4,688	1.01	8,623	1.72	282,827	1.34	453,966	2.35
No. 4.....	37,742	1.01	51,760	1.94	1,927,787	1.31	2,704,179	2.43
No. 5.....	1,702	.92	6,926	2.54	376,286	1.23	476,812	2.17
No. 6.....	66,671	1.11	92,073	2.50	3,330,960	1.40	3,731,277	2.66
No. 7.....	47,276	1.50	37,468	1.98	959,094	1.92	1,041,036	2.92
No. 8.....	<sup>1</sup> 213,786	1.01	<sup>2</sup> 227,247	2.04	15,949,286	1.27	17,124,714	2.45
No. 9.....	95,043	1.26	98,483	2.24	4,386,161	1.25	3,949,852	2.41
Total State...	608,628	1.11	751,911	2.08	34,728,219	1.33	40,748,734	2.48

<sup>1</sup> Includes 720 tons made into coke at the mines.<sup>2</sup> Includes 630 tons made into coke at the mines.

## Part II.—1918 COSTS AND SALES REALIZATIONS.

### 1. Number and Extent of Operations Covered.

The 1918 production of the 335 operators in Ohio from whom cost reports were obtained by the Commission was as follows:

#### District No. 1:

	Tons.	Per cent
9 operators from whom costs were obtained for 12 months.....	810, 091	63. 2
3 operators from whom costs were obtained for less than the full 12 months (actual tonnage reported 428,833 tons); estimated yearly tonnage.....	472, 188	36. 8
Total.....	1, 232, 279	100. 0

#### District No. 2:

21 operators from whom costs were obtained for 12 months...	861, 215	79. 8
2 operators from whom costs were obtained for 12 months but which were excluded for certain reasons.....	27, 800	2. 6
4 operators from whom costs were obtained for less than the full 12 months (actual tonnage reported 143,861 tons); estimated yearly tonnage.....	190, 656	17. 6
Total.....	1, 079, 671	100. 0

#### District No. 3:

39 operators from whom costs were obtained for 12 months...	8, 493, 432	89. 9
1 operator from whom costs were obtained for 12 months but which were excluded for certain reasons.....	34, 538	. 4
20 operators from whom costs were obtained for less than the full 12 months (actual tonnage reported 502,370 tons); estimated yearly tonnage.....	914, 880	9. 7
Total.....	9, 442, 850	100. 0

#### District No. 3a:

10 operators from whom costs were obtained for 12 months...	275, 809	61. 9
5 operators from whom costs were obtained for less than the full 12 months (actual tonnage reported 51,251 tons); estimated yearly tonnage.....	169, 812	38. 1
Total.....	445, 621	100. 0

#### District No. 4:

20 operators from whom costs were obtained for 12 months...	2, 196, 544	86. 8
1 operator from whom costs were obtained for 12 months but which were excluded for certain reasons.....	8, 543	. 3
10 operators from whom costs were obtained for less than the full 12 months (actual tonnage reported 157,806 tons); estimated yearly tonnage.....	325, 008	12. 9
Total.....	2, 530, 095	100. 0

District No. 5:		
10 operators from whom costs were obtained for 12 months...	Per cent. 480, 123	Tons. 96.6
1 operator from whom costs were obtained for 12 months but which were excluded for certain reasons.....	6, 000	1.2
1 operator from whom costs were obtained for less than the full 12 months (actual tonnage reported 7,264 tons); estimated yearly tonnage.....	10, 896	2.2
Total.....	<u>497, 019</u>	<u>100.0</u>
District No. 6:		
54 operators from whom costs were obtained for 12 months...	3, 957, 588	90.6
3 operators from whom costs were obtained for 12 months but which were excluded for certain reasons.....	88, 907	2.0
10 operators from whom costs were obtained for less than the full 12 months (actual tonnage reported 194,596 tons); estimated yearly tonnage.....	322, 632	7.4
Total.....	<u>4, 369, 127</u>	<u>100.0</u>
District No. 7:		
15 operators from whom costs were obtained for 12 months....	826, 733	84.3
2 operators from whom costs were obtained for 12 months but which were excluded for certain reasons.....	47, 203	4.8
4 operators from whom costs were obtained for less than the full 12 months (actual tonnage reported 34,806 tons); estimated yearly tonnage .....	107, 148	10.9
Total.....	<u>981, 084</u>	<u>100.0</u>
District No. 8:		
67 operators from whom costs were obtained for 12 months. ....	19, 209, 978	97.5
2 operators from whom costs were obtained for 12 months but which were excluded for certain reasons.....	21, 074	.1
9 operators from whom costs were obtained for less than the full 12 months (actual tonnage reported 282,068 tons); estimated yearly tonnage.....	465, 684	2.4
Total.....	<u>19, 696, 736</u>	<u>100.0</u>
District No. 9:		
11 operators from whom costs were obtained for 12 months....	5, 269, 166	99.8
1 operator from whom costs were obtained for 12 months but which were excluded for certain reasons.....	10, 941	.2
Total.....	<u>5, 280, 107</u>	<u>100.0</u>
State:		
256 operators from whom costs were obtained for 12 months...	42, 380, 679	92.9
13 operators from whom costs were obtained for 12 months but which were excluded for certain reasons .....	245, 006	.6
66 operators from whom costs were obtained for less than the full 12 months (actual tonnage reported 1,802,855 tons); estimated yearly tonnage.....	2, 978, 904	6.5
Total.....	<u>45, 604, 589</u>	<u>100.0</u>

The above figures are shown *inclusive* of power-house fuel for comparison with the United States Geological Survey statistics. The

total output of the 256 operators *exclusive* of power-house fuel was 41,692,194 tons.

According to statistics issued by the Geological Survey, the output of Ohio during 1918 was 45,812,943 tons, of which 908,613 tons were used at the mine for steam and heat. The Commission obtained cost information covering 44,428,540 tons, or 97 per cent of the total for Ohio as reported by the Geological Survey. It publishes in this report cost information on 41,692,194 tons, or 93 per cent of the output reported by the Geological Survey, after the exclusion of mine fuel from its total.

## 2. Classification of Producers by Number of Mines Operated.

The costs of the 256 operators shown in the tabulations for the Ohio districts cover the output of 389 mines. The following table shows the number of mines operated by the different producers:

TABLE 3.—*Number of mines operated by different producers in Ohio.*

Number of mines run by each operator.	Number of operators.	Proportion of total number.	Production tonnage, 1918.	Proportion of total production.
<b>District No. 1:</b>		<i>Per cent.</i>	<i>Tons.</i>	<i>Per cent.</i>
1 mine.....	8	88.9	629,411	78.1
4 mines.....	1	11.1	176,106	21.9
Total (number of mines, 12).....	9	100.0	805,517	100.0
<b>District No. 2:</b>				
1 mine.....	17	80.9	506,876	61.0
2 mines.....	2	9.5	50,825	7.2
3 mines.....	1	4.8	80,426	9.7
5 mines.....	1	4.8	182,809	22.1
Total (number of mines, 29).....	21	100.0	820,935	100.0
<b>District No. 3:</b>				
1 mine.....	31	79.5	2,141,031	25.7
2 mines.....	4	10.3	704,145	9.5
5 mines.....	2	5.1	1,561,657	18.8
12 mines.....	2	5.1	3,824,540	46.0
Total (number of mines, 73).....	39	100.0	8,321,282	100.0
<b>District No. 3a:</b>				
1 mine.....	9	90.0	244,076	88.5
3 mines.....	1	10.0	31,733	11.5
Total (number of mines, 12).....	10	100.0	275,809	100.0
<b>District No. 4:</b>				
1 mine.....	18	90.0	1,527,487	71.3
2 mines.....	1	5.0	360,265	16.8
4 mines.....	1	5.0	255,478	11.9
Total (number of mines, 24).....	20	100.0	2,143,230	100.0
<b>District No. 5:</b>				
1 mine.....	8	80.0	345,830	72.5
2 mines.....	2	20.0	131,032	27.5
Total (number of mines, 12).....	10	100.0	476,862	100.0
<b>District No. 6:</b>				
1 mine.....	45	83.3	2,650,342	68.7
2 mines.....	7	13.0	1,062,494	27.2
3 mines.....	2	3.7	160,650	4.1
Total (number of mines, 65).....	54	100.0	3,872,485	100.0
<b>District No. 7:</b>				
1 mine.....	13	86.6	585,078	73.7
2 mines.....	1	6.7	77,704	9.6
3 mines.....	1	6.7	135,112	16.7
Total (number of mines, 18).....	15	100.0	807,894	100.0

TABLE 3.—*Number of mines operated by different producers in Ohio—Continued.*

Number of mines run by each operator.	Number of operators.	Proportion of total number.	Production tonnage, 1918.	Proportion of total production.
<b>District No. 8:</b>		<i>Per cent.</i>	<i>Tons.</i>	<i>Per cent.</i>
1 mine.....	46	68.6	4,850,898	22.9
2 mines.....	7	10.4	3,570,082	18.8
3 mines.....	6	9.0	3,676,734	19.4
4 mines.....	5	7.5	4,703,646	24.8
6 mines.....	3	4.5	2,687,303	14.1
Total (number of mines, 116).....	67	100.0	18,988,643	100.0
<b>District No. 9:</b>				
1 mine.....	7	63.6	530,133	10.3
2 mines.....	1	9.1	463,450	9.0
4 mines.....	2	18.2	1,485,680	28.7
11 mines.....	1	9.1	2,692,246	52.0
Total (number of mines, 28).....	11	100.0	5,171,527	100.0
<b>State:</b>				
1 mine.....	202	78.9	13,529,161	32.4
2 mines.....	25	9.7	6,508,986	15.6
3 mines.....	11	4.3	4,084,664	9.8
4 mines.....	9	3.5	6,620,919	15.9
5 mines.....	3	1.2	1,744,366	4.2
6 mines.....	3	1.2	2,687,303	6.4
11 mines.....	1	.4	2,692,246	6.5
12 mines.....	2	.8	3,824,549	9.2
Total (number of mines, 389).....	256	100.0	41,692,194	100.0

It will be seen that in the State 202 one-mine producers (78.9 per cent of the total number shown in the table) operated only one mine each and produced 32.4 per cent of the output. Their proportions varied considerably from district to district. The highest proportions of one-mine operators were in Districts Nos. 1, 3a, and 4, and Districts Nos. 3a and 1 also showed the highest proportions of the total output produced by such operators. The lowest proportions of one-mine operators were in Districts Nos. 8 and 9, which districts also showed the lowest proportions of the total output produced by such operators.

The following statement shows the average number of mines operated by a producer, and the average production per mine operated by one-mine operators and by operators of two or more mines, for each district and for the State of Ohio:

District.	Average number of mines operated by a producer.	Average production per mine operated by—		
		One-mine operators.	Operators of two or more mines.	All operators combined.
	<i>Mines.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
No. 1.....	1.3	78,676	44,027	67,126
No. 2.....	1.4	29,757	26,922	28,584
No. 3.....	1.9	69,066	147,149	113,990
No. 3a.....	1.2	27,119	10,578	22,992
No. 4.....	1.2	84,860	102,624	89,301
No. 5.....	1.2	43,229	32,758	39,739
No. 6.....	1.2	59,096	60,657	59,577
No. 7.....	1.2	45,775	42,563	44,939
No. 8.....	1.7	94,585	209,111	163,695
No. 9.....	2.5	75,733	221,019	191,912
State.....	1.5	66,976	150,604	107,178

The number and size of mines in Ohio are shown in further detail in the report for 1917 of the United States Geological Survey, from which the following statistics are derived:<sup>1</sup>

Annual output of mines.	Mines.		Tonnage.	
	Number.	Proportion of total in State.	Average production per mine. <sup>1</sup>	Proportion of total State output.
		<i>Per cent.</i>	<i>Tons.</i>	<i>Per cent.</i>
200,000 tons and over.....	61	4.3	289,638	43.4
100,000 to 199,999 tons.....	95	6.1	142,896	30.2
50,000 to 99,999 tons.....	72	5.1	70,923	12.5
10,000 to 49,999 tons.....	178	12.7	22,665	9.9
Under 10,000 tons.....	1,010	71.8	1,617	4.0
State.....	1,407	100.0	28,961	100.0

<sup>1</sup> Including power-house fuel.

### 3. Classification of Producers by Size of Output.

The 256 producers tabulated are classified by size of their output in 1918, exclusive of power-house fuel, as follows:

TABLE 4.—*Classification of 256 Ohio operators by size of output.*

Production during 1918.	Number of operators.	Proportion of total number.	Tonnage produced, 1918.	Proportion of total production.
		<i>Per cent.</i>	<i>Tons.</i>	<i>Per cent.</i>
<b>District No. 1:</b>				
Under 50,000 tons.....	3	33.3	80,412	10.0
50,000 to 99,999 tons.....	2	22.2	140,840	17.5
100,000 to 499,999 tons.....	4	44.5	584,265	72.5
Total.....	9	100.0	805,517	100.0
<b>District No. 2:</b>				
Under 50,000 tons.....	17	80.9	416,013	50.2
50,000 to 99,999 tons.....	3	14.3	230,113	27.8
100,000 to 499,999 tons.....	1	4.8	182,909	22.0
Total.....	21	100.0	828,935	100.0
<b>District No. 3:</b>				
Under 50,000 tons.....	17	43.6	530,923	6.4
50,000 to 49,999 tons.....	7	17.9	510,788	6.1
100,000 to 499,999 tons.....	12	30.8	2,337,432	28.1
500,000 to 999,999 tons.....	1	2.6	959,439	11.5
1,000,000 tons and over.....	2	5.1	3,082,700	47.9
Total.....	39	100.0	8,321,282	100.0
<b>District No. 3a:</b>				
Under 50,000 tons.....	10	100.0	275,809	100.0
<b>District No. 4:</b>				
Under 50,000 tons.....	9	45.0	218,480	10.2
50,000 to 99,999 tons.....	5	25.0	368,002	17.2
100,000 to 499,999 tons.....	6	30.0	1,556,748	72.6
Total.....	20	100.0	2,143,230	100.0
<b>District No. 5:</b>				
Under 50,000 tons.....	6	60.0	125,473	26.3
50,000 to 99,999 tons.....	2	20.0	119,751	25.1
100,000 to 499,999 tons.....	2	20.0	231,633	48.6
Total.....	10	100.0	476,852	100.0

<sup>1</sup> Mineral Resources of the United States, 1917. Part II. pp. 947-948.

TABLE 4.—*Classification of 256 Ohio operators by size of output—Continued.*

Production during 1918.	Number of operators.	Proportion of total number.	Tonnage produced, 1918.	Proportion of total production.
District No. 6:		<i>Per cent.</i>	<i>Tons.</i>	<i>Per cent.</i>
Under 50,000 tons.....	30	55.5	780,417	19.6
50,000 to 99,999 tons.....	13	24.1	943,832	24.4
100,000 to 499,999 tons.....	11	20.4	2,164,246	56.0
Total.....	54	100.0	3,872,495	100.0
District No. 7:				
Under 50,000 tons.....	11	73.4	306,027	37.9
50,000 to 99,999 tons.....	2	13.3	139,745	17.3
100,000 to 499,999 tons.....	2	13.3	362,122	44.8
Total.....	15	100.0	807,894	100.0
District No. 8:				
Under 50,000 tons.....	17	25.4	494,853	2.6
50,000 to 99,999 tons.....	12	17.9	898,503	4.7
100,000 to 499,999 tons.....	25	37.3	5,287,647	27.9
500,000 to 999,999 tons.....	8	11.9	5,967,507	31.4
1,000,000 and over.....	5	7.5	6,345,953	33.4
Total.....	67	100.0	18,988,643	100.0
District No. 9:				
Under 50,000 tons.....	4	36.3	124,110	2.6
50,000 to 99,999 tons.....	2	18.2	183,373	3.5
100,000 to 499,999 tons.....	2	18.2	676,142	13.1
500,000 to 999,999 tons.....	3	18.2	1,485,640	28.7
1,000,000 tons and over.....	1	9.1	2,692,245	52.1
Total.....	11	100.0	5,171,527	100.0
State:				
Under 50,000 tons.....	124	48.4	3,346,517	8.0
50,000 to 99,999 tons.....	48	18.8	3,534,907	8.5
100,000 to 499,999 tons.....	65	25.4	13,357,066	32.1
500,000 to 999,999 tons.....	11	4.3	8,402,725	20.2
1,000,000 tons and over.....	8	3.1	13,000,899	31.2
Total.....	256	100.0	41,692,194	100.0

If the 66 operators from whom costs were received for less than 12 months during 1918 and the 13 operators from whom costs were received, but in unusable form, be considered, it would be found that 6 operators had an estimated annual production of over 100,000 tons each, or an average of 171,774 tons. The remaining 73 operators had an average estimated annual production of 30,042 tons. Had reports for the full 12 months been available from them, it would be found that about 73 per cent of the operators, who mined less than 100,000 tons each, produced about 20 per cent of the output.

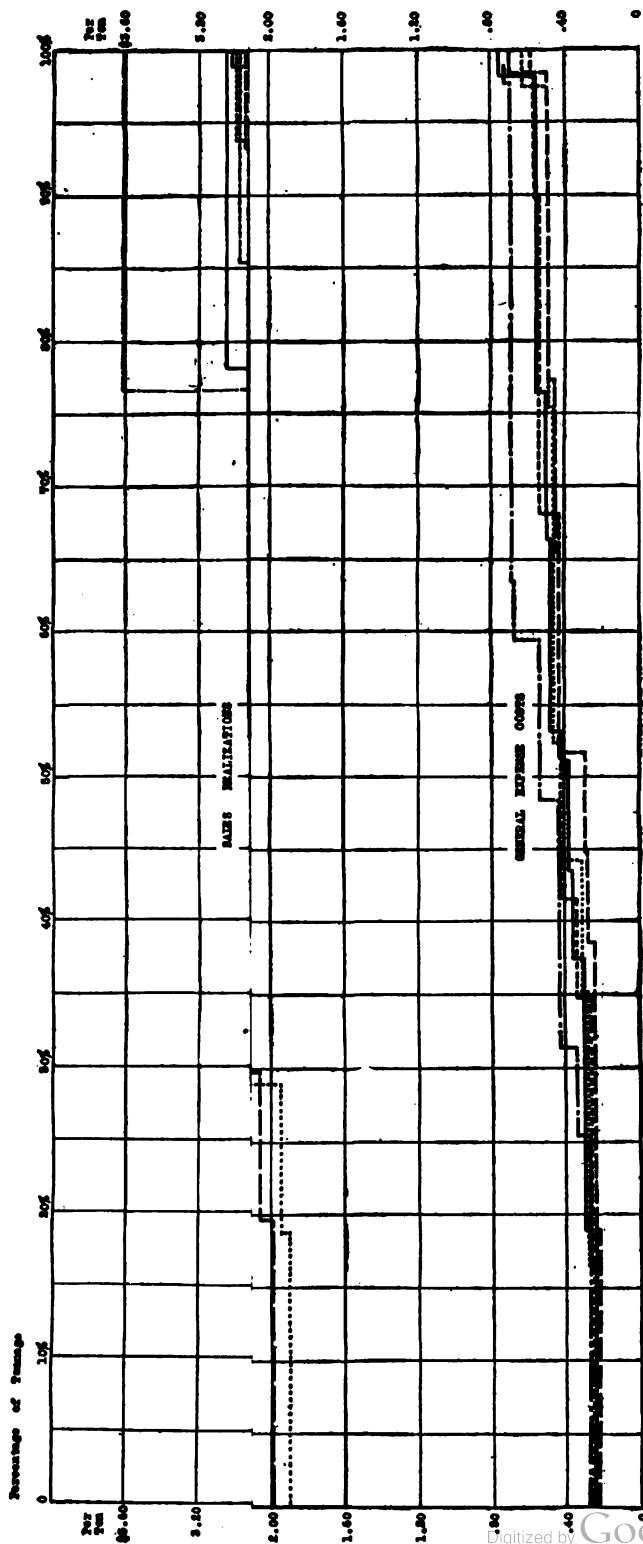
#### 4. The 1918 Costs and Sales Realizations Shown by Districts.

There was no change in the official wage scale for bituminous coal miners in Ohio during 1918. Therefore, the labor costs per ton for the period were principally affected by changes in the production tonnage and not by changes in the rate of wages paid labor. The effect of decreased production in increasing labor costs can be clearly seen on Diagrams I to X (opposite) and Charts 1 and 2 (opposite p. 48).

# BITUMINOUS COAL - OHIO

DIAGRAM I.

DISTRICT NO. 1



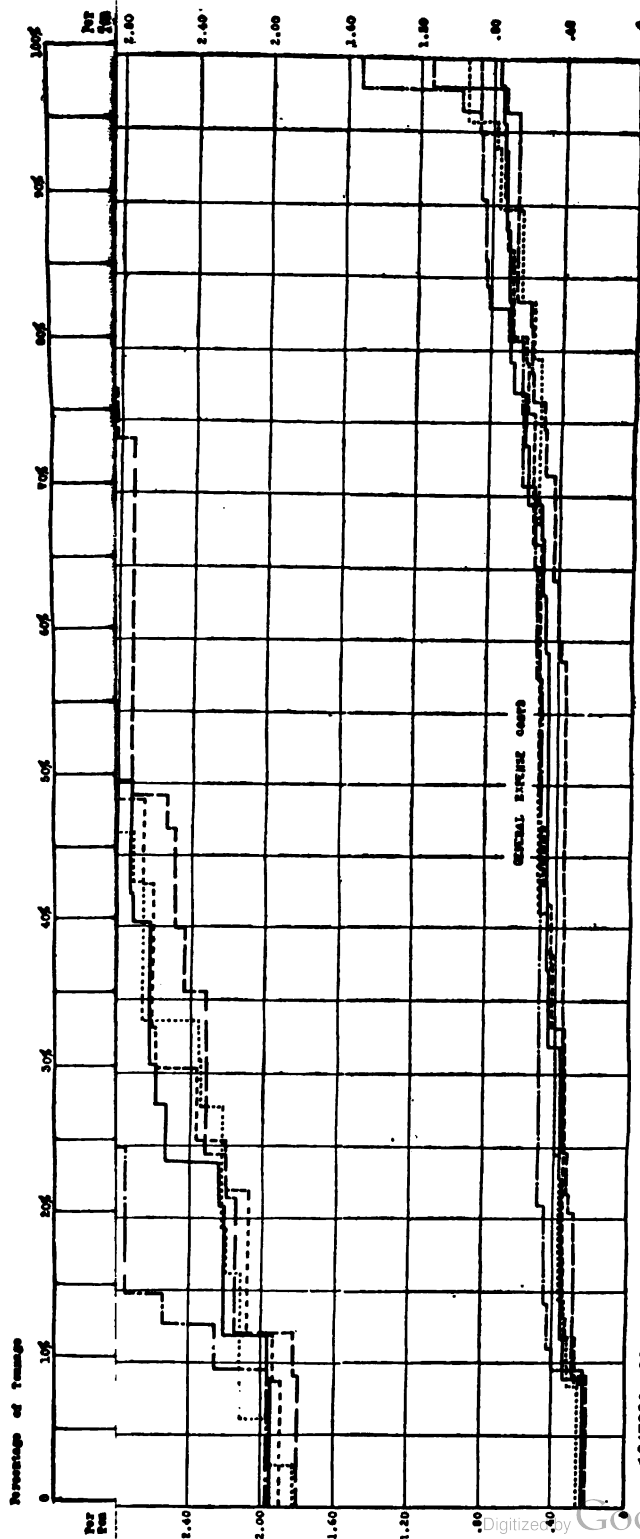
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## DIAGRAM II

**DISTRICT NO. 2**



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**BITUMINOUS COAL -- OHIO**

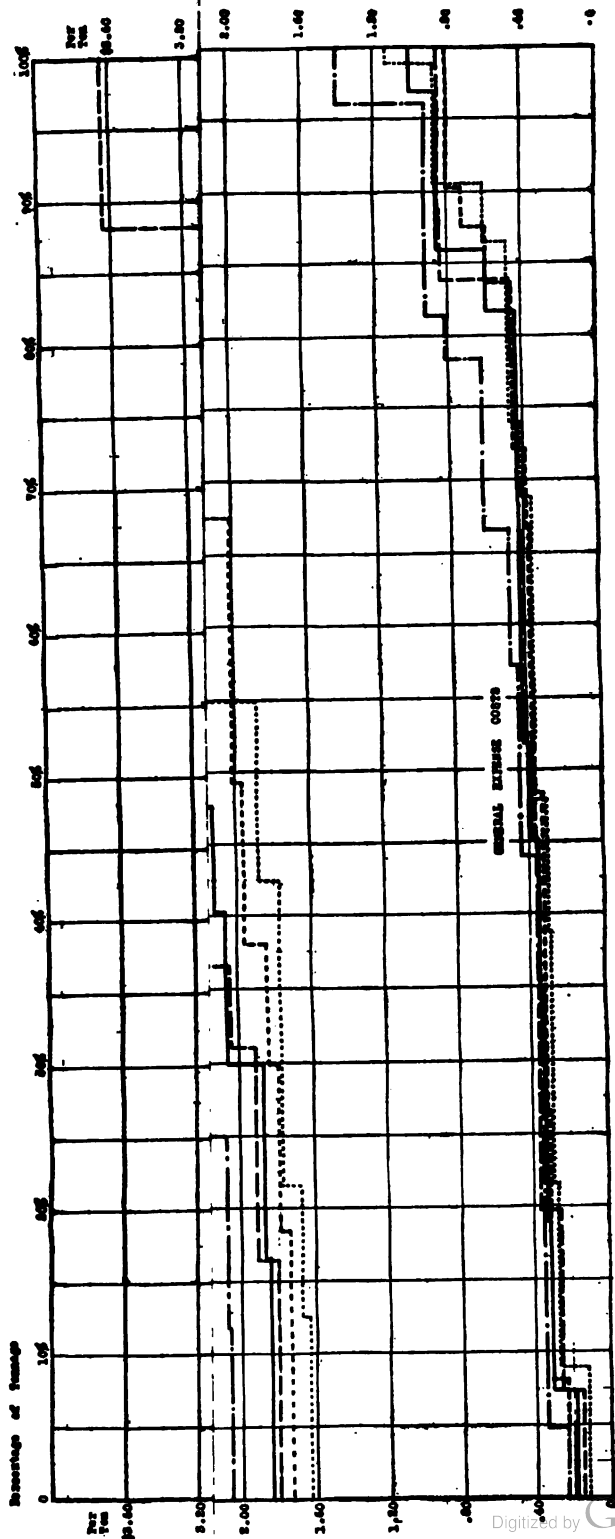
**DISTRICT NO. 3**

**DIAGRAM III.**



**DIAGRAM IV.**

**DISTRICT NO. 3A.**



164783°—20. (To face page 42.) No. 4.









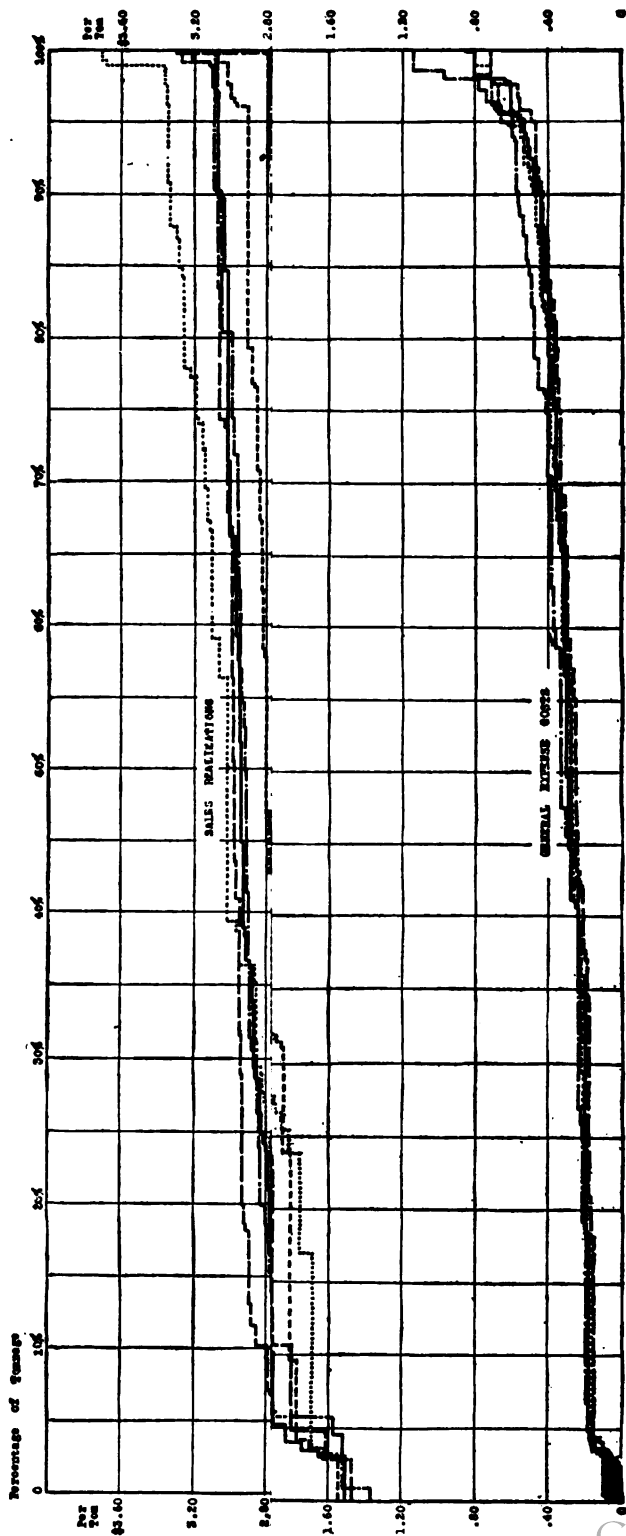
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# BITUMINOUS COAL—OHIO

DIAGRAM VII.

DISTRICT NO. 6



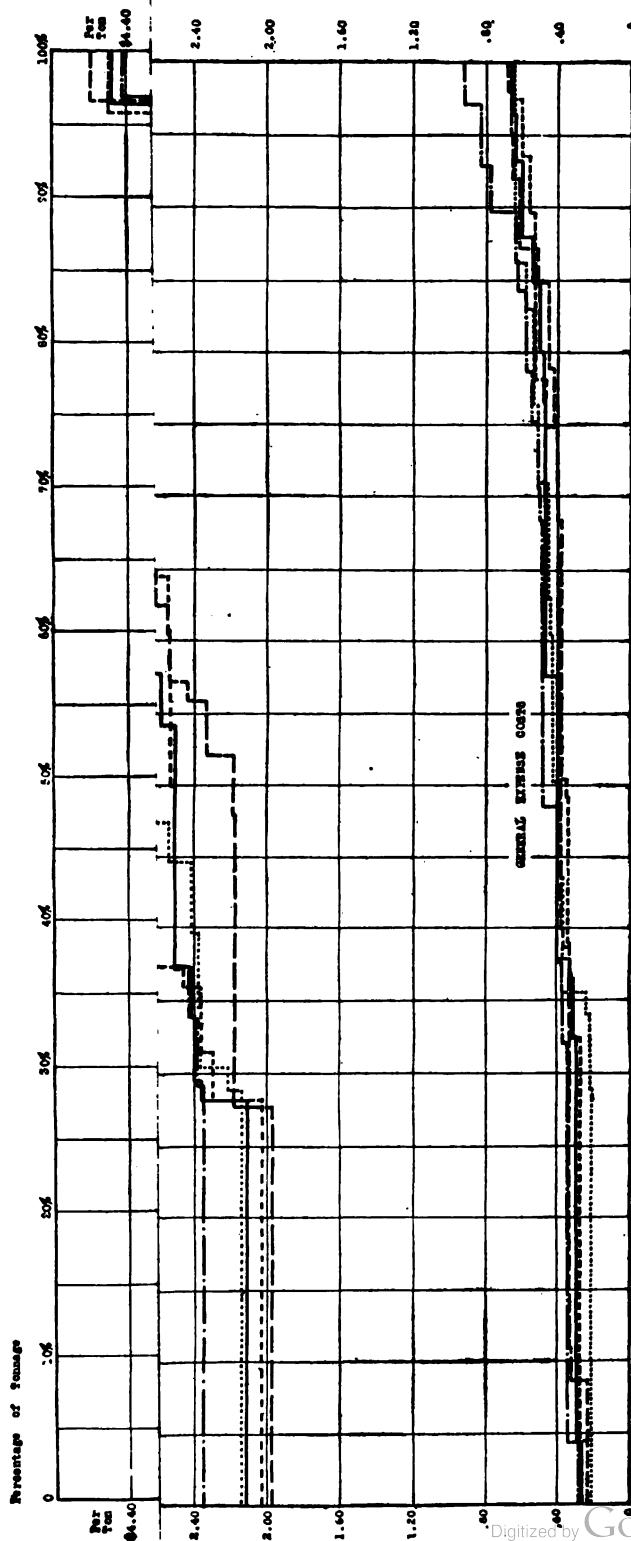
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# BITUMINOUS COAL - OHIO

DIAGRAM VIII.

DISTRICT NO 7



164733-20. (To face page 42.) No. 8.



**BITUMINOUS COAL -- OHIO**

**DISTRICT NO. 8**

**DIAGRAM IX.**





**BITUMINOUS COAL - OHIO**

**DISTRICT NO. 9**

**DIAGRAM X.**

**Percentage of Sample**



Tables 1 to 50 in the appendix to this report (see pp. 190-251) show the costs and the sales realizations arranged from low to high in 1-cent groupings for each period shown. Throughout the tables for a given district the costs are shown for the same operators, but the costs of any given operator do not necessarily hold the same relative position in the 1-cent groups for each period. The shift of any operator in his relative position, from period to period, is generally slight.

The tables show, for each quarter and for the year as a whole, by 1-cent groupings, the tonnage produced at that cost, its per cent of the total production, the place of the group in the accumulated percentage, and the number of operators whose costs fell within each 1-cent group.

A summary of the significant facts brought out in Appendix Tables 1 to 50 appears in the following tables, in which are compared the true average cost, the range in cost of 90 per cent of the output which had the lowest costs and sales realizations, and the extreme range for the entire output of the 256 operators:

TABLE 5.—1918 quarterly and yearly "Revised" costs and sales realizations for 9 operators in District No. 1 of the State of Ohio, showing averages and range for 90 per cent and for 100 per cent of total output.

Period, 1918.	Costs per net ton.												Sales Realization per net ton.			
	Labor.				Supplies.				General expense.						Total f. o. b. mine.	
	Range.		Aver- age.	90 per cent output.	Range.		Aver- age.	90 per cent output.	Range.		Aver- age.	90 per cent output.	Range.		Aver- age.	90 per cent output.
January-March.....	1.67	\$1.33-\$1.97	\$1.33-\$2.17	\$0.25	\$0.00-\$0.52	\$0.38	\$0.22-\$0.49	\$0.22-\$0.62	\$2.30	\$1.90-\$2.56	\$1.90-\$2.85	\$2.76	\$2.52-\$3.00			
April-June.....	1.76	1.54-2.05	1.54-2.23	.32	.00-.62	.40	.25-.55	.25-.57	2.43	2.21-2.65	2.21-3.07	2.81	2.57-2.98			
July-September.....	1.78	1.42-2.28	1.42-2.28	.29	.00-.58	.35	.22-.49	.22-.69	2.43	1.90-2.96	1.90-3.15	2.81	2.53-2.95			
October-December..	1.90	1.51-2.69	1.51-3.03	.40	.00-.74	.52	.27-.69	.27-1.65	2.82	2.36-3.78	2.36-5.08	2.84	2.39-3.61			
Year.....	1.77	1.45-2.17	1.45-2.23	.30	.00-.62	.41	.24-.55	.24-.75	2.48	2.14-2.91	2.14-3.26	2.80	2.51-3.05			

TABLE 6.—1918 quarterly and yearly "Revised" costs and sales realizations for 21 operators in District No. 2 of the State of Ohio, showing averages and range for 90 per cent and for 100 per cent of total output.

Period, 1918.	Costs per net ton.												Sales Realization per net ton.												
	Labor.						Supplies.								General expense.				Total f. o. b. mine.						
	Range.		Range.		Range.		Range.		Range.		Range.		Range.		Range.		Range.		Range.		Range.				
																							Range.		Range.
	Aver- age.	90 per cent output.	Aver- age.	90 per cent output.	Aver- age.	90 per cent output.	Aver- age.	90 per cent output.	Aver- age.	90 per cent output.	Aver- age.	90 per cent output.	Aver- age.	90 per cent output.	Aver- age.	90 per cent output.	Aver- age.	90 per cent output.	Aver- age.	90 per cent output.	Aver- age.	90 per cent output.			
January-March.....	22.07	\$1.38-\$2.45	\$1.38-\$3.17	\$0.19	\$0.02-\$0.27	\$1.02-\$0.45	\$0.49	\$0.26-\$0.76	\$0.26-\$0.94	\$2.75	\$1.82-\$3.32	\$1.82-\$3.97	\$3.48	\$2.50-\$3.83	\$2.50-\$4.31	2.93- 3.84	2.93- 3.84	2.93- 3.84	2.93- 3.84	2.93- 3.84	2.93- 3.84	2.93- 3.84	2.93- 3.84	2.93- 3.84	2.93- 3.84
April-June.....	2.00	1.34- 2.49	1.34- 3.01	.22	.00-.32	.00-.44	.48	.23-.72	.23-.87	2.70	1.90-3.19	1.90-4.04	3.43	2.93- 3.80	2.93- 3.80	2.93- 3.80	2.93- 3.80	2.93- 3.80	2.93- 3.80	2.93- 3.80	2.93- 3.80	2.93- 3.80	2.93- 3.80	2.93- 3.80	
July-September.....	2.00	1.38- 2.53	1.38- 3.23	.22	.00-.20	.00-.64	.42	.21-.66	.21-1.14	2.64	1.80-3.35	1.80-5.01	3.43	2.93- 3.57	2.93- 3.57	2.93- 3.57	2.93- 3.57	2.93- 3.57	2.93- 3.57	2.93- 3.57	2.93- 3.57	2.93- 3.57	2.93- 3.57	2.93- 3.57	
October-December..	2.20	1.55- 2.67	1.55- 2.99	.31	.00-.63	.00-.64	.56	.23-.83	.23-1.56	3.07	1.97-3.92	1.97-4.18	3.32	2.78- 3.55	2.78- 3.55	2.78- 3.55	2.78- 3.55	2.78- 3.55	2.78- 3.55	2.78- 3.55	2.78- 3.55	2.78- 3.55	2.78- 3.55	2.78- 3.55	
Year.....	2.06	1.42- 2.51	1.42- 2.83	.23	.00-.29	.00-.42	.45	.23-.72	.23-.76	2.77	1.95- 3.46	1.95- 3.83	3.42	2.90- 3.72	2.90- 3.72	2.90- 3.72	2.90- 3.72	2.90- 3.72	2.90- 3.72	2.90- 3.72	2.90- 3.72	2.90- 3.72	2.90- 3.72	2.90- 3.72	

TABLE 7.—1918 quarterly and yearly "Revised" costs and sales realizations for 39 operators in District No. 3 of the State of Ohio, showing averages and range for 90 per cent and for 100 per cent of total output.

Period, 1918.	Costs per net ton.										Sales Realization per net ton.			
	Labor.			Supplies.			General expense.			Total f. o. b. mine.				
	Range.			Range.			Range.			Range.				
	Aver. age.	90 per cent output.	100 per cent output.	Aver. age.	90 per cent output.	100 per cent output.	Aver. age.	90 per cent output.	100 per cent output.	Aver. age.		90 per cent output.	100 per cent output.	
January-March.....	1.41	\$1.12-\$1.59	\$1.12-\$2.55	\$0.21	\$0.00-\$0.28	\$0.00-\$0.94	\$0.26	\$0.17-\$0.36	\$0.17-\$1.57	\$1.88	\$1.48-\$2.11	\$1.48-\$5.36	\$2.55	\$2.07-\$2.87
April-June.....	1.35	1.14-1.59	1.14-2.18	.23	.07-.31	.07-.53	.25	.16-.40	.16-.57	1.86	1.58-2.32	1.58-3.05	2.53	2.22-2.79
July-September.....	1.43	1.16-1.66	1.16-2.39	.21	.00-.26	.00-.58	.24	.16-.35	.16-.56	1.88	1.53-2.26	1.53-3.24	2.62	2.28-3.06
October-December.....	1.54	1.20-1.86	1.20-2.59	.27	.01-.37	.01-.86	.32	.15-.47	.15-1.12	2.13	1.45-2.66	1.45-4.16	2.58	2.25-2.90
Year 1918.....	1.43	1.22-1.68	1.22-2.21	.23	.06-.31	.06-.46	.27	.16-.39	.16-.59	1.93	1.56-2.33	1.56-2.95	2.57	2.14-3.01

TABLE 8.—1918 quarterly and yearly "Revised" costs and sales realizations for 10 operators in District No. 3a of the State of Ohio, showing averages and range for 90 per cent and for 100 per cent of total output.

Period, 1918.	Costs per net ton.										Sales Realization per net ton.		
	Labor.			Supplies.			General expense.			Total f. o. b. mine.			
	Range.			Range.			Range.						
	Aver- age.	90 per cent output.	100 per cent output.	Aver- age.	90 per cent output.	100 per cent output.	Aver- age.	90 per cent output.	100 per cent output.			Aver- age.	90 per cent output.
January-March.....	\$1.46	\$1.14-\$2.01	\$1.14-\$3.01	\$0.20	\$0.08-\$0.57	\$0.08-\$0.82	\$0.39	\$0.12-\$0.60	\$0.12-\$1.13	\$2.14	\$1.63-\$2.88	\$2.16-\$2.83	\$2.16-\$2.97
April-June, 1918.....	1.47	1.15-1.84	1.15-2.24	.23	.06-.35	.06-.68	.41	.23-.72	.23-.80	2.11	1.73-2.68	2.18-2.80	2.18-2.81
July-September.....	1.69	1.23-2.40	1.23-2.40	.32	.05-.92	.05-.92	.43	.15-.85	.15-.88	2.44	1.80-3.30	2.39-3.64	2.39-3.64
October-December.....	1.70	1.18-1.92	1.18-2.54	.36	.09-.77	.09-.77	.54	.23-.92	.23-1.40	2.60	2.06-3.03	2.35-2.90	2.35-2.90
Year.....	1.58	1.19-1.85	1.19-2.22	.29	.07-.67	.07-.67	.44	.18-.86	.18-1.00	2.31	1.84-2.83	2.28-2.88	2.28-2.88

TABLE 9.—1918 quarterly and yearly "Revised" costs and sales realizations for 20 operators in District No. 4 of the State of Ohio, showing averages and range for 90 per cent and for 100 per cent of total output.

Period, 1918.	Costs per net ton.												Sales Realization per net ton.		
	Labor.			Supplies.			General expense.			Total f. o. b. mine.					
	Aver- age.	Range.		Aver- age.	Range.		Aver- age.	Range.		Aver- age.	Range.		Aver- age.	Range.	
		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.
	January-March.....	\$1.47	\$1.05-1.60	\$0.25	\$0.05-0.34	\$0.05-1.61	\$0.30	\$0.10-0.43	\$0.10-0.68	\$2.02	\$1.56-2.25	\$2.63	\$2.10-2.81	90 per cent output.	100 per cent output.
April-June.....	1.40	.88-1.79	.27	.11-.41	.11-.55	.30	.08-.52	.08-.60	2.03	1.53-2.56	2.61	2.43-2.76	2.61	2.43-3.14	2.43-3.14
July-September.....	1.45	.93-1.81	.23	.07-.33	.07-.60	.29	.09-.43	.09-.58	1.97	1.56-2.45	2.90	2.50-3.05	2.90	2.50-3.16	2.50-3.16
October-December.....	1.58	1.24-2.20	.27	.09-.53	.09-.72	.33	.10-.50	.10-.91	2.18	1.66-2.69	2.78	2.35-2.94	2.78	2.35-3.66	2.35-3.66
Year.....	1.49	1.01-1.82	.26	.10-.37	.10-.53	.30	.09-.49	.09-.63	2.06	1.58-2.43	2.74	2.42-2.86	2.74	2.42-3.05	2.42-3.05

TABLE 10.—1918 quarterly and yearly "Revised" costs and sales realizations for 10 operators in District No. 5 of the State of Ohio, showing averages and range for 90 per cent and for 100 per cent of total output.

Period, 1918.	Costs per net ton.										Sales Realization per net ton.			
	Labor.			Supplies.			General expense.			Total f. o. b. mine.				
	Range.		Aver- age.	Range.		Aver- age.	Range.		Aver- age.	Range.		Aver- age.	Range.	
	90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.			
	90 per cent output.	100 per cent output.	90 per cent output.	100 per cent output.	90 per cent output.	100 per cent output.	90 per cent output.	100 per cent output.	90 per cent output.	100 per cent output.	90 per cent output.	100 per cent output.		
January-March.....	\$1.53	\$1.32-2.10	\$0.19	\$0.03-0.23	\$0.03-0.55	\$0.33	\$0.15-0.52	\$0.15-0.61	\$2.05	\$1.78-2.56	\$2.53	\$2.32-2.86		
April-June.....	1.64	1.31-1.83	.25	.06-.43	.06-.43	.31	.20-.43	.20-.59	2.10	1.74-2.24	2.57	2.35-2.90		
July-September.....	1.65	1.45-1.86	.27	.12-.41	.12-.47	.35	.21-.43	.21-.58	2.27	2.07-2.37	2.60	2.34-2.83		
October-December.....	1.73	1.50-2.10	.32	.14-.59	.14-.61	.41	.22-.60	.22-.64	2.46	1.97-3.00	2.58	2.22-2.70		
Year.....	1.61	1.41-1.94	.28	.11-.39	.11-.39	.35	.19-.44	.19-.55	2.21	1.87-2.45	2.57	2.36-2.76		

TABLE 11.—1918 quarterly and yearly "Revised" costs and sales realizations for 54 operators in District No. 6 of the State of Ohio, showing averages and range for 90 per cent and for 100 per cent of total output.

Period, 1918.	Costs per net ton.										Sales Realization per net ton.			
	Labor.			Supplies.			General expense.			Total f. o. b. mine.				
	Range.		Aver- age.	Range.		Aver- age.	Range.		Aver- age.	Range.		Aver- age.	Range.	
	90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.
January-March.....	\$1.64	\$1.24-2.07	\$0.28	\$0.01-0.53	\$0.01-0.67	\$0.30	\$0.05-0.47	\$0.05-0.80	\$2.22	\$1.51-2.99	\$1.51-3.74	\$2.00-3.33	\$2.00-3.71	
April-June.....	1.63	1.26-1.97	.31	.05-.61	.05-1.16	.29	.05-.44	.05-.71	2.23	1.54-3.03	1.54-3.61	2.01-2.91	2.01-3.27	
July-September.....	1.65	1.07-2.24	.35	.05-.58	.05-1.04	.27	.05-.43	.05-.85	2.27	1.47-3.16	1.47-4.57	2.00-3.07	2.00-3.08	
October-December.....	1.78	.92-2.26	.41	.07-.72	.07-1.02	.34	.07-.56	.07-1.14	2.53	1.37-3.23	1.37-4.31	2.44-3.05	2.44-3.09	
Year.....	1.67	1.24-2.05	.34	.05-.54	.05-.87	.30	.05-.44	.05-.80	2.31	1.51-2.99	1.51-3.58	2.09-3.07	2.09-3.21	

TABLE 12.—1918 quarterly and yearly "Revised" costs and sales realizations for 15 operators in District No. 7 of the State of Ohio, showing averages and range for 90 per cent and for 100 per cent of total output.

Period, 1918.	Costs per net ton.										Sales Realization per net ton.		
	Labor.			Supplies.			General expense.			Total f. o. b. mine.			
	Range.		Aver- age.	Range.		Aver- age.	Range.		Aver- age.	Range.		Aver- age.	Range.
	90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		
	January-March.....	\$1.96	\$1.53-\$2.60	\$0.28	\$0.05-\$0.40	\$0.05-\$0.57	\$0.40	\$0.21-\$0.65	\$0.21-\$0.95	\$2.64	\$2.14-\$3.32	\$2.14-\$3.56	\$3.44
April-June.....	1.95	1.37-3.01	.28	.05-.61	.05-.69	.38	.23-.56	.23-.86	2.61	2.03-3.53	2.03-3.53	3.28	2.73-4.06
July-September.....	1.87	1.45-2.45	.22	.04-.44	.04-.47	.40	.22-.61	.23-.68	2.49	1.97-3.11	1.97-4.04	3.57	3.17-4.60
October-December.....	2.07	1.38-2.40	.26	.05-.47	.05-.54	.48	.28-.78	.28-.92	2.81	2.35-3.34	2.35-4.86	3.49	3.05-4.42
Year.....	1.96	1.45-2.40	.26	.05-.41	.05-.49	.41	.26-.60	.26-.66	2.63	2.11-3.06	2.11-3.87	3.45	3.03-4.48



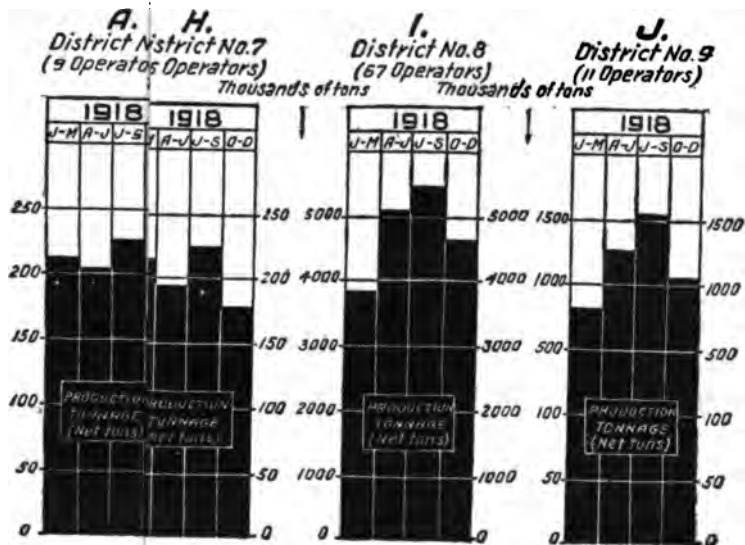
TABLE 13.—1918 quarterly and yearly "Revised" costs and sales realizations for 67 operators in District No. 8 of the State of Ohio, showing averages and range for 90 per cent and for 100 per cent of total output.

Period, 1918.	Costs per net ton.						Sales Realization per net ton.		
	Labor.			Supplies.			General expense.		
	Range.			Range.			Range.		
	Aver. age.	90 per cent output.	100 per cent output.	Aver. age.	90 per cent output.	100 per cent output.	Aver. age.	90 per cent output.	100 per cent output.
January-March.....	\$1.28	\$0.57-\$1.48	\$0.57-\$3.42	\$0.26	\$0.05-\$0.44	\$0.05-\$1.73	\$0.31	\$0.06-\$0.59	\$0.06-\$1.02
April-June.....	1.17	.35-1.43	.35-4.44	.26	.02-.39	.02-1.54	.27	.08-.47	.08-1.14
July-September.....	1.19	.37-1.41	.37-3.01	.26	.05-.44	.05-1.35	.28	.06-.40	.06-.77
October-December.....	1.26	.51-1.46	.51-2.49	.32	.02-.52	.02-1.27	.33	.03-.53	.03-.97
Year.....	1.22	.49-1.45	.49-2.63	.28	.04-.42	.04-1.04	.29	.06-.46	.06-.78
								.85-2.15	.85-3.73
								1.60-2.71	1.60-3.28

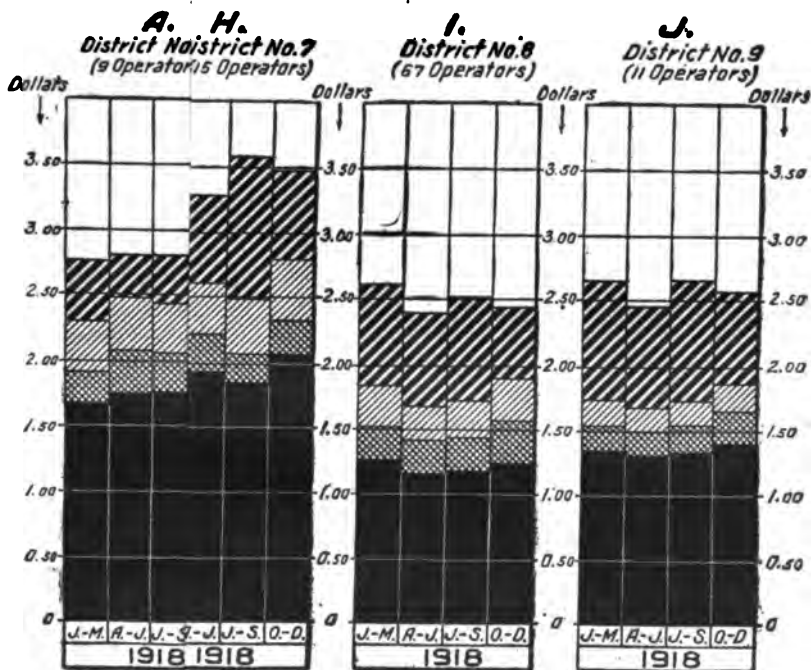
TABLE 14.—1918 quarterly and yearly "Revised" costs and sales realizations for 11 operators in District No. 9 of the State of Ohio, showing averages and range for 90 per cent and for 100 per cent of total output.

Period, 1918.	Costs per net ton.						Sales Realization per net ton.		
	Labor.			Supplies.			General expense.		
	Range.			Range.			Range.		
	Aver. age.	90 per cent output.	100 per cent output.	Aver. age.	90 per cent output.	100 per cent output.	Aver. age.	90 per cent output.	100 per cent output.
January-March.....	\$1.35	\$0.64-\$1.51	\$0.64-\$2.13	\$0.19	\$0.09-\$0.20	\$0.09-\$0.27	\$0.21	\$0.15-\$0.21	\$0.15-\$0.33
April-June.....	1.31	.76-1.47	.76-2.96	.18	.06-.26	.06-.28	.21	.15-.21	.15-.22
July-September.....	1.33	1.13-1.54	1.13-2.36	.21	.15-.28	.15-.32	.22	.15-.20	.15-.21
October-December.....	1.41	1.32-1.61	1.32-2.23	.25	.12-.42	.12-.66	.22	.15-.24	.15-.31
Year.....	1.35	1.14-1.51	1.14-2.30	.21	.12-.29	.12-.29	.20	.16-.21	.16-.27
								1.07-1.90	1.07-2.94
								2.06-2.69	2.06-2.84

# CHAR1



# CHAR2



1917

1918

1919

1920

1921

1922

1923

1924

1925

1926

1927

1928

1929

1930

1931

1932

1933

1934

1935

1936

1937

1938

1939

The following table of yearly averages is given for the sake of ready comparison of the different districts:

TABLE 15.—Average costs and sales realizations of all Ohio districts for the year 1918.

District.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton.
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
	<i>Tons.</i>						
No. 1.....	805,517	\$1.77	\$0.30	\$0.41	\$2.48	\$2.80	\$0.32
No. 2.....	828,935	2.06	.23	.48	2.77	3.42	.65
No. 3.....	8,321,282	1.43	.23	.27	1.93	2.57	.64
No. 3a.....	275,809	1.58	.29	.44	2.31	2.64	.33
No. 4.....	2,143,230	1.49	.26	.30	2.05	2.74	.69
No. 5.....	476,862	1.61	.25	.35	2.21	2.57	.36
No. 6.....	3,872,495	1.67	.34	.30	2.31	2.89	.58
No. 7.....	807,894	1.96	.26	.41	2.63	3.45	.82
No. 8.....	18,988,643	1.22	.28	.29	1.79	2.49	.70
No. 9.....	5,171,527	1.35	.21	.20	1.76	2.59	.83

The labor cost was highest for Districts Nos. 2 and 7 (\$2.06 and \$1.96 per ton) and lowest for Districts Nos. 8, 9, and 3 (\$1.22, \$1.35 and \$1.43 per ton). The marked differences in labor cost are due, in a large degree, to the difference in the thicknesses of seams mined in the respective districts, and to some extent, also, are attributable to differences in the mining methods followed. As will be noted from the tabulation of thickness of seam (see Table 18, p. 55), 96 per cent of the output of District No. 2, and 92 per cent of that of District No. 7, came from seams which averaged less than 4 feet thick, while the proportion of the output from such seams was but 1 per cent in District No. 8, 1 per cent in District No. 9, and 4 per cent in District No. 3. Some information on the different mining methods followed in the respective districts is given in the following statement, which is compiled from data given in the Statistics of Mines and Quarries in Ohio, 1917 (Report No. 36), issued by the Ohio Department of Investigation and Statistics. Since the statistics are reported by counties, the tonnage has been allocated to the districts by the same method as that described on page 34 of this report. The statistics are for the calendar year 1917.

District.	Proportion of total output produced by—		
	Pick mining.	Machine mining.	Stripping.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
No. 1.....	14.3	85.7	0.0
No. 2.....	65.5	34.5	.0
No. 3.....	7.8	91.8	.4
No. 3a.....	8.1	91.9	.0
No. 4.....	8.4	89.3	2.3
No. 5.....	36.2	63.8	.0
No. 6.....	26.8	68.2	5.0
No. 7.....	48.0	53.5	.5
No. 8.....	4.5	90.2	5.3
No. 9.....	1.7	97.9	.4
Total.....	11.3	85.7	3.0

It will be noted that in Districts Nos. 2 and 7, where, as already pointed out, the labor costs per ton were highest, that the proportions of the output which was pick mined were also highest, while in Districts Nos. 8, 9, and 3, when the labor costs were lowest, the proportions of pick-mined coal were also lowest.

The bearing on the investment of the use of mining machines in place of hand labor, and on the margin necessary to the profitable operation of any particular mine, has already been pointed out under the discussion of the nature of the margin (see p. 27).

It will be noted from the foregoing table that a part of the output came from "strip pits," sometimes called "stripping mines," which are open workings conducted much after the manner of stone quarries. The "overburden," or earth and rock overlying the coal seam, is first removed—generally by steam shovel—and the exposed coal is then broken up, often by explosives, and is then prepared for market similar to coal from "deep mines" (which may be shaft, slope, or drift mines) by means of mechanical cleaning, screening, and sizing machinery, before loading on railroad cars, or, in some cases, is loaded without further preparation directly into railroad cars for transportation to destination.

Of the 67 operators in District No. 8, whose returns are included in the 1918 tabulations, 10 operators, with a total output of 2,135,997 tons, operated strip pits, and 57 operators with an output of 16,852,646 tons operated deep mines (shaft, slope, or drift). The average labor cost of the 10 strip-pit operators was 74 cents per ton, and their total f. o. b. mine cost \$1.60 per ton. The average labor cost of the 57 deep-mine operators was \$1.28 per ton, and their total f. o. b. mine cost \$1.81. For a more detailed analysis of these costs, see Table 20, p. 59.

### 5. Relation of Costs to Sales Realizations.

The following table shows the distribution, by quarters and for the year 1918, between the items of labor, supplies, general expense, and margin of each dollar of sales realization received by the operator:

TABLE 16.—*Distribution of the amount paid by the purchaser between the principal costs and the margin, based on each dollar of sales realization, for all districts in Ohio, 1918, by quarters and for the year.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
District No. 1:					
January-March, 1918.....	60	9	14	83	17
April-June, 1918.....	63	11	14	88	12
July-September, 1918.....	63	10	13	86	14
October-December, 1918.....	67	14	18	99	1
Year.....	63	11	15	89	11

TABLE 16.—*Distribution of the amount paid by the purchaser between the principal costs and the margin, based on each dollar of sales realization, etc.—Continued.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
District No. 2:	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
January-March, 1918.....	60	5	14	79	21
April-June, 1918.....	59	6	14	79	21
July-September, 1918.....	59	6	12	77	23
October-December, 1918.....	66	9	17	92	8
Year.....	60	7	14	81	19
District No. 3:					
January-March, 1918.....	56	8	10	74	26
April-June, 1918.....	55	9	10	74	26
July-September, 1918.....	55	8	9	72	28
October-December, 1918.....	60	10	13	83	17
Year.....	56	9	10	75	25
District No. 3a:					
January-March, 1918.....	58	12	16	86	14
April-June, 1918.....	58	9	16	83	17
July-September, 1918.....	59	11	15	85	15
October-December, 1918.....	64	14	20	98	2
Year.....	60	11	17	88	12
District No. 4:					
January-March, 1918.....	56	10	11	77	23
April-June, 1918.....	56	10	12	78	22
July-September, 1918.....	50	8	10	68	32
October-December, 1918.....	57	9	12	78	22
Year.....	54	10	11	75	25
District No. 5:					
January-March, 1918.....	60	8	13	81	19
April-June, 1918.....	60	10	12	82	18
July-September, 1918.....	64	10	13	87	13
October-December, 1918.....	67	12	16	95	5
Year.....	62	10	14	86	14
District No. 6:					
January-March, 1918.....	56	10	10	76	24
April-June, 1918.....	60	11	10	81	19
July-September, 1918.....	56	12	9	77	23
October-December, 1918.....	61	14	12	87	13
Year.....	58	12	10	80	20
District No. 7:					
January-March, 1918.....	57	8	12	77	23
April-June, 1918.....	59	9	12	80	20
July-September, 1918.....	53	6	11	70	30
October-December, 1918.....	60	7	14	81	19
Year.....	57	8	11	76	24
District No. 8:					
January-March, 1918.....	49	10	12	71	29
April-June, 1918.....	49	11	11	71	29
July-September, 1918.....	48	10	11	69	31
October-December, 1918.....	52	13	13	78	22
Year.....	49	11	12	72	28
District No. 9:					
January-March, 1918.....	51	7	8	66	34
April-June, 1918.....	53	7	9	69	31
July-September, 1918.....	50	8	7	65	35
October-December, 1918.....	55	10	8	73	27
Year.....	52	8	8	68	32

These facts are shown in graphic form in Chart 3 (opposite p. 52).

## 6. Comparison of "Claimed" and "Revised" Costs.

The foregoing tables present costs which have in some cases been "Revised" by the accountants of the Commission, from "Claimed"

figures reported on the original schedules by the operators. Tables 51-60 in the appendix to this report (see pp. 252-263) show the "Claimed" 1918 costs, compiled in all cases directly from the figures submitted by the operators.

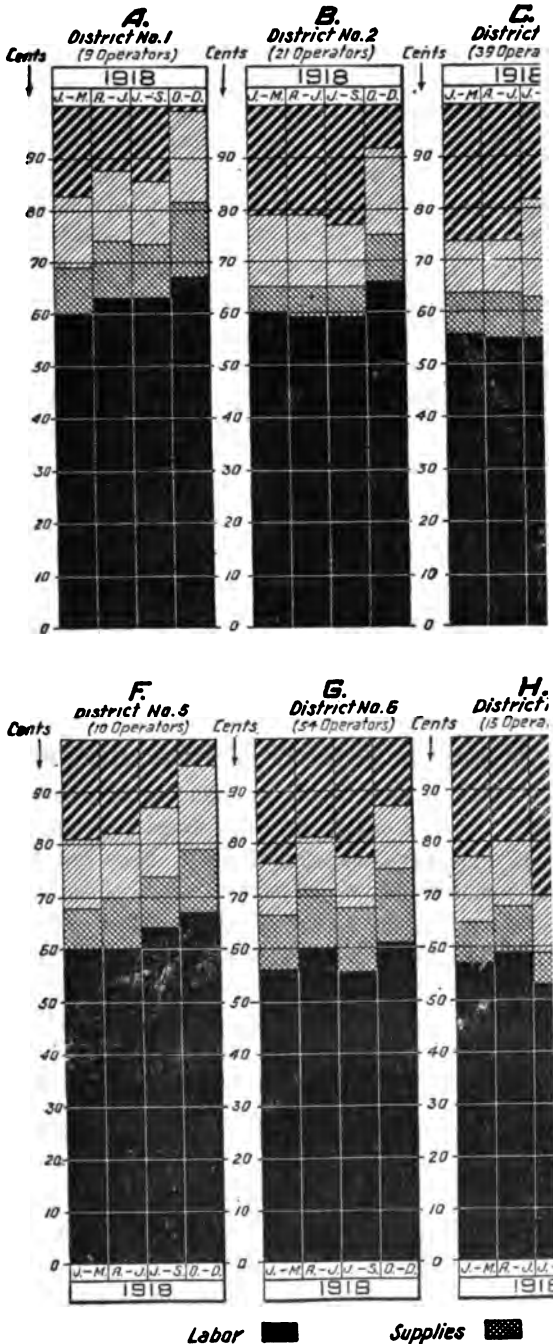
The changes brought about through the revision in the average costs for the year 1918 for the 256 operators were as follows:

Item.	"Claimed" costs.	"Revised" costs.	Increase (+) or decrease (-) due to revision.
<b>District No. 1:</b>			
Production.....tons..	810,091	805,517	1- 4,574
Labor.....per ton..	\$1.76	\$1.77	+ \$0.01
Supplies.....do...	\$0.34	\$0.30	- \$0.04
General expense.....do...	\$0.62	\$0.41	- \$0.21
Total f. o. b. mine.....do...	\$2.72	\$2.48	- \$0.24
<b>District No. 2:</b>			
Production.....tons..	861,215	828,935	1- 32,280
Labor.....per ton..	\$1.98	\$2.06	+ \$0.08
Supplies.....do...	\$0.34	\$0.23	- \$0.11
General expense.....do...	\$0.61	\$0.48	- \$0.13
Total f. o. b. mine.....do...	\$2.93	\$2.77	- \$0.16
<b>District No. 3:</b>			
Production.....tons..	8,493,432	8,321,282	1- 172,150
Labor.....per ton..	\$1.40	\$1.43	+ \$0.03
Supplies.....do...	\$0.26	\$0.23	- \$0.03
General expense.....do...	\$0.38	\$0.27	- \$0.11
Total f. o. b. mine.....do...	\$2.04	\$1.93	- \$0.11
<b>District No. 3a:</b>			
Production.....tons..	275,809	275,809	.....
Labor.....per ton..	\$1.58	\$1.58	.....
Supplies.....do...	\$0.30	\$0.29	- \$0.01
General expense.....do...	\$0.51	\$0.44	- \$0.07
Total f. o. b. mine.....do...	\$2.39	\$2.31	- \$0.08
<b>District No. 4:</b>			
Production.....tons..	2,196,544	2,143,230	1- 53,314
Labor.....per ton..	\$1.41	\$1.49	+ \$0.08
Supplies.....do...	\$0.31	\$0.26	- \$0.05
General expense.....do...	\$0.41	\$0.30	- \$0.11
Total f. o. b. mine.....do...	\$2.13	\$2.05	- \$0.08
<b>District No. 5:</b>			
Production.....tons..	480,122	476,862	1- 3,261
Labor.....per ton..	\$1.60	\$1.61	+ \$0.01
Supplies.....do...	\$0.27	\$0.25	- \$0.02
General expense.....do...	\$0.40	\$0.35	- \$0.05
Total f. o. b. mine.....do...	\$2.27	\$2.21	- \$0.06
<b>District No. 6:</b>			
Production.....tons..	3,957,588	3,872,495	1- 85,093
Labor.....per ton..	\$1.64	\$1.67	+ \$0.03
Supplies.....do...	\$0.39	\$0.34	- \$0.05
General expense.....do...	\$0.36	\$0.30	- \$0.06
Total f. o. b. mine.....do...	\$2.39	\$2.31	- \$0.08
<b>District No. 7:</b>			
Production.....tons..	826,733	807,894	1- 18,839
Labor.....per ton..	\$1.91	\$1.96	+ \$0.05
Supplies.....do...	\$0.28	\$0.26	- \$0.02
General expense.....do...	\$0.61	\$0.41	- \$0.20
Total f. o. b. mine.....do...	\$2.80	\$2.63	- \$0.17
<b>District No. 8:</b>			
Production.....tons..	19,209,978	18,968,643	1- 221,335
Labor.....per ton..	\$1.20	\$1.22	+ \$0.02
Supplies.....do...	\$0.30	\$0.28	- \$0.02
General expense.....do...	\$0.41	\$0.29	- \$0.12
Total f. o. b. mine.....do...	\$1.91	\$1.79	- \$0.12
<b>District No. 9:</b>			
Production.....tons..	5,269,166	5,171,527	1- 97,639
Labor.....per ton..	\$1.32	\$1.35	+ \$0.03
Supplies.....do...	\$0.24	\$0.21	- \$0.03
General expense.....do...	\$0.23	\$0.20	- \$0.03
Total f. o. b. mine.....do...	\$1.79	\$1.76	- \$0.03
<b>State:</b>			
Production.....tons..	42,380,679	41,692,194	1- 688,485
Labor.....per ton..	\$1.36	\$1.38	+ \$0.02
Supplies.....do...	\$0.29	\$0.26	- \$0.03
General expense.....do...	\$0.39	\$0.29	- \$0.10
Total f. o. b. mine.....do...	\$2.04	\$1.93	- \$0.11

<sup>1</sup> Due to exclusion of power-house fuel.

# BITUMINOUS C

**CHART-3.** Distribution of Amount paid by Purchaser for the Margin, based on each dollar of Sale





1. The first step in the process is to identify the problem or issue that needs to be addressed. This involves gathering information and understanding the context of the problem.

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The increase of 2 cents per ton in the average "Revised" labor cost for the State over the "Claimed" is caused by the use of the "Revised" production tonnage as a divisor. The total "Claimed" labor cost was \$57,570,058, and the total "Revised" labor cost was \$57,640,781. The increase in the amount of "Revised" cost over "Claimed" was due to the transference to labor cost of certain items, such as labor employed in "stripping," which were reported by some operators under the heading of general expense.

The costs claimed by some operators were obviously open to question as to their accuracy. Such operators were required by the Commission to furnish further detailed information in support of their "Claimed" costs. The examination of such detailed information revealed the fact that they had often included in their general expense costs such items as contingent and maintenance reserves, donations, etc. In some cases items had been included in supplies which should properly be classed as additions to capital. In the item of general expense, the chief instances of revision affected two operators in the State and involved about one-tenth of 1 per cent of the total output for the year 1918 of the 256 operators shown. The nature of the inflations was principally in the items of officers' salaries which were far in excess of those paid in neighboring operations of similar size, and in charges for depletion and depreciation which had not been computed according to the rules prescribed in the instructions issued by the Commission.

#### 7. 1918 Costs Shown by Thickness of Seam Mined.

About 67.6 per cent of the output of Ohio came from 54 producers who operated more than one mine. Most of these producers did not report the costs of each mine separately. In order to include them in a tabulation to show costs by thickness of seam, it was necessary to use the average of the seams mined by them. This has led to the inclusion of data in the tabulation for the 256 operators, which to a slight extent vitiates its scientific value, since it is not known whether equal tonnage was derived from mines which had seams above or below the average thickness. The tabulation by thickness of seam for the 256 operators follows:

TABLE 17.—*Seam tabulation of "Revised" costs for 256 operators in Ohio.*

Thickness of seam.	Number of operators.	Production, 1918.	Costs per ton.			
			Labor.	Supplies.	General expense.	Total f. o. b. mine.
District No. 1:		<i>Tons.</i>				
36 to 47 inches.....	3	377,794	\$1.76	\$0.41	\$0.40	\$2.57
48 to 50 inches.....	4	263,042	1.85	.23	.48	2.56
60 to 71 inches.....	2	164,681	1.66	.22	.30	2.18
Total.....	9	805,517	1.77	Dis. 30	aid by 41	2.45

TABLE 17.—Seam tabulation of "Revised" costs for 256 operators in Ohio—Continued.

Thickness of seam.	Number of operators.	Production, 1918.	Costs per ton.			
			Labor.	Supplies.	General expense.	Total f. o. b. mine.
<b>District No. 2:</b>		<i>Tons.</i>				
24 to 35 inches.....	11	424,496	\$2.32	\$0.26	\$0.56	\$3.14
36 to 47 inches.....	8	368,758	1.76	.20	.40	2.36
48 to 59 inches.....	2	35,681	2.00	.18	.55	2.73
<b>Total.....</b>	<b>21</b>	<b>828,935</b>	<b>2.06</b>	<b>.23</b>	<b>.48</b>	<b>2.77</b>
<b>District No. 3:</b>						
24 to 35 inches.....	1	99,150	1.70	.28	.35	2.33
36 to 47 inches.....	4	252,212	1.61	.30	.28	2.19
48 to 59 inches.....	14	2,356,327	1.88	.22	.31	2.11
60 to 71 inches.....	3	1,256,232	1.34	.31	.25	1.90
72 to 83 inches.....	15	4,318,889	1.26	.20	.24	1.80
84 to 95 inches.....	2	38,492	1.78	.27	.40	2.45
<b>Total.....</b>	<b>39</b>	<b>8,321,282</b>	<b>1.43</b>	<b>.23</b>	<b>.27</b>	<b>1.93</b>
<b>District No. 3a:</b>						
36 to 47 inches.....	1	30,172	1.74	.18	.86	2.78
48 to 59 inches.....	5	153,507	1.48	.29	.43	2.20
60 to 71 inches.....	2	60,196	1.69	.45	.32	2.46
72 to 83 inches.....	1	20,319	1.74	.26	.18	2.12
108 to 119 inches.....	1	11,615	1.60	.07	.59	2.26
<b>Total.....</b>	<b>10</b>	<b>275,809</b>	<b>1.58</b>	<b>.39</b>	<b>.44</b>	<b>2.31</b>
<b>District No. 4:</b>						
36 to 47 inches.....	8	978,422	1.61	.28	.24	2.23
48 to 59 inches.....	8	463,489	1.51	.21	.23	1.95
60 to 71 inches.....	2	407,594	1.40	.18	.17	1.75
72 to 83 inches.....	2	295,725	1.17	.35	.46	1.98
<b>Total.....</b>	<b>20</b>	<b>2,143,230</b>	<b>1.49</b>	<b>.26</b>	<b>.30</b>	<b>2.05</b>
<b>District No. 5:</b>						
36 to 47 inches.....	8	346,744	1.67	.21	.35	2.23
48 to 59 inches.....	1	119,491	1.41	.39	.36	2.16
72 to 83 inches.....	1	10,627	1.79	.11	.19	2.09
<b>Total.....</b>	<b>10</b>	<b>476,862</b>	<b>1.61</b>	<b>.25</b>	<b>.35</b>	<b>2.21</b>
<b>District No. 6:</b>						
24 to 35 inches.....	2	276,123	1.56	.37	.31	2.24
36 to 47 inches.....	28	1,304,913	1.80	.28	.31	2.39
48 to 59 inches.....	27	2,269,224	1.61	.36	.30	2.27
60 to 71 inches.....	2	22,235	1.38	.82	.39	2.09
<b>Total.....</b>	<b>54</b>	<b>3,872,495</b>	<b>1.67</b>	<b>.34</b>	<b>.30</b>	<b>2.31</b>
<b>District No. 7:</b>						
24 to 35 inches.....	3	56,488	1.98	.29	.52	2.79
36 to 47 inches.....	10	686,988	1.97	.26	.40	2.63
48 to 59 inches.....	1	35,762	1.88	.26	.26	2.40
60 to 71 inches.....	1	28,756	1.60	.83	.66	2.50
<b>Total.....</b>	<b>15</b>	<b>807,894</b>	<b>1.96</b>	<b>.26</b>	<b>.41</b>	<b>2.63</b>
<b>District No. 8:</b>						
36 to 47 inches.....	3	229,423	1.83	.84	.31	2.48
48 to 59 inches.....	23	5,040,059	1.08	.27	.39	1.74
60 to 71 inches.....	40	12,341,324	1.27	.27	.25	1.79
72 to 83 inches.....	2	1,377,837	1.18	.34	.32	1.84
<b>Total.....</b>	<b>67</b>	<b>18,988,643</b>	<b>1.22</b>	<b>.28</b>	<b>.29</b>	<b>1.79</b>
<b>District No. 9:</b>						
36 to 47 inches.....	1	43,552	2.30	.12	.52	2.94
60 to 71 inches.....	9	5,030,749	1.34	.21	.20	1.75
72 to 83 inches.....	1	97,226	1.51	.25	.26	2.02
<b>Total.....</b>	<b>11</b>	<b>5,171,527</b>	<b>1.35</b>	<b>.21</b>	<b>.20</b>	<b>1.76</b>
<b>State:</b>						
24 to 35 inches.....	17	856,257	1.98	.30	.45	2.73
36 to 47 inches.....	69	4,616,878	1.76	.28	.35	2.39
48 to 59 inches.....	84	10,736,582	1.36	.27	.35	1.98
60 to 71 inches.....	64	19,311,767	1.39	.25	.24	1.79
72 to 83 inches.....	22	6,120,603	1.31	.24	.27	1.82
84 to 95 inches.....	2	88,492	1.78	.27	.40	2.45
108 to 119 inches.....	1	11,615	1.60	.67	.59	2.26
<b>Total.....</b>	<b>256</b>	<b>41,002,194</b>	<b>1.36</b>	<b>.26</b>	<b>.29</b>	<b>1.93</b>

In order to eliminate the effect of the inclusion of average thicknesses, where producers operated two or more mines, a seam tabulation has been made of the 202 one-mine operators. It will be noted from the following table, that the tonnage of the 202 one-mine operators was somewhat more regularly distributed among the different thicknesses of seam than was the case with the 256 operators.

TABLE 18.—*Distribution, between seams, of output of 256 operators and 202 one-mine operators in Ohio.*

Thickness of seam.	9 operators producing 805,517 tons in 1918.		8 operators producing 629,411 tons in 1918.	
	Number of operators.	Per cent of output.	Number of operators.	Per cent of output.
<b>District No. 1:</b>				
36 to 47 inches.....	3	46.9	2	32.0
48 to 59 inches.....	4	39.7	4	41.8
60 to 71 inches.....	2	20.4	2	26.2
<b>Total.....</b>	<b>9</b>	<b>100.0</b>	<b>8</b>	<b>100.0</b>
	21 operators producing 828,935 tons in 1918.		17 operators producing 505,875 tons in 1918.	
<b>District No. 2:</b>				
24 to 35 inches.....	11	51.2	8	35.9
36 to 47 inches.....	8	44.5	7	57.0
48 to 59 inches.....	2	4.3	2	7.1
<b>Total.....</b>	<b>21</b>	<b>100.0</b>	<b>17</b>	<b>100.0</b>
	39 operators producing 8,321,282 tons in 1918.		31 operators producing 2,141,031 tons in 1918.	
<b>District No. 3:</b>				
24 to 35 inches.....	1	1.2	.....	.....
36 to 47 inches.....	4	3.6	4	11.8
48 to 59 inches.....	14	28.3	13	52.5
60 to 71 inches.....	3	15.1	3	6.5
72 to 83 inches.....	15	51.9	11	27.4
84 to 95 inches.....	2	.5	2	1.8
<b>Total.....</b>	<b>39</b>	<b>100.0</b>	<b>31</b>	<b>100.0</b>
	10 operators producing 275,809 tons in 1918.		9 operators producing 244,076 tons in 1918.	
<b>District No. 3a:</b>				
36 to 47 inches.....	1	16.9	1	12.4
48 to 59 inches.....	5	55.7	5	62.9
60 to 71 inches.....	2	21.8	1	11.7
72 to 83 inches.....	1	7.4	1	8.3
106 to 119 inches.....	1	4.2	1	4.7
<b>Total.....</b>	<b>10</b>	<b>100.0</b>	<b>9</b>	<b>100.0</b>
	20 operators producing 2,143,230 tons in 1918.		18 operators producing 1,527,487 tons in 1918.	
<b>District No. 4:</b>				
36 to 47 inches.....	8	45.6	6	23.6
48 to 59 inches.....	8	21.6	8	30.2
60 to 71 inches.....	2	19.0	2	26.7
72 to 83 inches.....	2	13.8	2	19.4
<b>Total.....</b>	<b>20</b>	<b>100.0</b>	<b>18</b>	<b>100.0</b>

TABLE 18.—*Distribution, between seams, of output of 256 operators and 202 one-mine operators in Ohio—Continued.*

Thickness of seam.	10 operators producing 476,862 tons in 1918.		8 operators producing 345,830 tons in 1918.	
	Number of operators.	Per cent of output.	Number of operators.	Per cent of output.
<b>District No. 5:</b>				
36 to 47 inches.....	8	72.7	6	62.4
48 to 59 inches.....	1	25.1	1	34.5
72 to 83 inches.....	1	2.2	1	5.1
<b>Total.....</b>	<b>10</b>	<b>100.0</b>	<b>8</b>	<b>100.0</b>
	54 operators producing 3,872,495 tons in 1918.		45 operators producing 2,659,342 tons in 1918.	
<b>District No. 6:</b>				
24 to 35 inches.....	2	7.1	2	10.4
36 to 47 inches.....	23	33.7	20	28.6
48 to 59 inches.....	27	58.6	21	60.2
60 to 71 inches.....	2	.6	2	.8
<b>Total.....</b>	<b>54</b>	<b>100.0</b>	<b>45</b>	<b>100.0</b>
	15 operators producing 807,894 tons in 1918.		13 operators producing 595,078 tons in 1918.	
<b>District No. 7:</b>				
24 to 35 inches.....	3	7.0	3	9.5
36 to 47 inches.....	10	85.0	8	79.7
48 to 59 inches.....	1	4.4	1	6.0
60 to 71 inches.....	1	3.6	1	4.8
<b>Total.....</b>	<b>15</b>	<b>100.0</b>	<b>13</b>	<b>100.0</b>
	67 operators producing 18,988,643 tons in 1918.		46 operators producing 4,350,898 tons in 1918.	
<b>District No. 8:</b>				
36 to 47 inches.....	3	1.2	3	5.3
48 to 59 inches.....	22	26.5	15	35.8
60 to 71 inches.....	40	65.0	27	56.8
72 to 83 inches.....	2	7.3	1	2.1
<b>Total.....</b>	<b>67</b>	<b>100.0</b>	<b>46</b>	<b>100.0</b>
	11 operators producing 5,171,527 tons in 1918.		7 operators producing 530,133 tons in 1918.	
<b>District No. 9:</b>				
36 to 47 inches.....	1	0.8	1	8.2
60 to 71 inches.....	9	97.3	5	73.5
72 to 83 inches.....	1	1.9	1	18.3
<b>Total.....</b>	<b>11</b>	<b>100.0</b>	<b>7</b>	<b>100.0</b>
	256 operators producing 41,692,194 tons in 1918.		202 operators producing 13,529,161 tons in 1918.	
<b>State:</b>				
24 to 35 inches.....	17	2.1	13	3.8
36 to 47 inches.....	69	11.1	58	21.1
48 to 59 inches.....	84	25.8	69	29.5
60 to 71 inches.....	61	46.3	42	27.0
72 to 83 inches.....	22	14.7	17	8.2
84 to 95 inches.....	2	.1	2	.3
108 to 119 inches.....	1	1.0	1	.1
<b>Total.....</b>	<b>256</b>	<b>100.0</b>	<b>202</b>	<b>100.0</b>

<sup>1</sup> Less than .05 per cent.

The tabulation of cost, by thickness of seam, for the 202 one-mine operators follows:

TABLE 19.—*Seam tabulation of "Revised" costs for 202 one-mine operators in Ohio.*

Thickness of seam.	Number of operators.	Production, 1918.	Costs per ton.			
			Labor.	Supplies.	General expense.	Total f. o. b. mine.
<b>District No. 1:</b>		<i>Tons.</i>				
36 to 47 inches.....	2	201,688	\$1.74	\$0.51	\$0.28	\$2.53
48 to 59 inches.....	4	263,042	1.85	.23	.48	2.56
60 to 71 inches.....	2	164,681	1.66	.22	.30	2.18
Total.....	8	629,411	1.77	.31	.37	2.45
<b>District No. 2:</b>						
24 to 35 inches.....	8	181,862	2.34	.28	.63	3.25
36 to 47 inches.....	7	268,532	1.67	.21	.41	2.29
48 to 59 inches.....	2	85,681	2.00	.18	.55	2.73
Total.....	17	505,875	1.94	.23	.60	2.67
<b>District No. 3:</b>						
36 to 47 inches.....	4	252,212	1.61	.30	.28	2.19
48 to 59 inches.....	12	1,124,399	1.64	.20	.33	2.17
60 to 71 inches.....	2	138,642	1.26	.38	.26	1.90
72 to 83 inches.....	11	687,286	1.52	.21	.37	2.10
84 to 95 inches.....	2	88,492	1.78	.27	.40	2.45
Total.....	31	2,141,031	1.58	.23	.33	2.14
<b>District No. 3a:</b>						
36 to 47 inches.....	1	30,172	1.74	.18	.86	2.78
48 to 59 inches.....	5	153,507	1.48	.29	.43	2.20
60 to 71 inches.....	1	28,463	1.51	.20	.35	2.06
72 to 83 inches.....	1	20,819	1.74	.20	.18	2.12
108 to 119 inches.....	1	11,615	1.60	.07	.59	2.26
Total.....	9	244,076	1.54	.25	.46	2.25
<b>District No. 4:</b>						
36 to 47 inches.....	6	360,679	1.58	.26	.30	2.14
48 to 59 inches.....	8	463,489	1.51	.21	.23	1.96
60 to 71 inches.....	2	407,594	1.40	.18	.17	1.75
72 to 83 inches.....	2	295,725	1.17	.35	.46	1.98
Total.....	18	1,527,487	1.43	.24	.28	1.95
<b>District No. 5:</b>						
36 to 47 inches.....	6	215,712	1.75	.19	.40	2.34
48 to 59 inches.....	1	119,491	1.41	.39	.36	2.16
72 to 83 inches.....	1	10,627	1.79	.11	.19	2.09
Total.....	8	345,830	1.63	.26	.38	2.27
<b>District No. 6:</b>						
24 to 35 inches.....	2	276,123	1.56	.37	.31	2.24
36 to 47 inches.....	20	759,234	1.96	.29	.40	2.65
48 to 59 inches.....	21	1,601,750	1.61	.33	.28	2.22
60 to 71 inches.....	2	22,235	1.38	.32	.39	2.09
Total.....	45	2,659,342	1.70	.32	.32	2.34
<b>District No. 7:</b>						
24 to 35 inches.....	3	56,488	1.98	.29	.52	2.79
36 to 47 inches.....	8	474,072	1.93	.29	.37	2.59
48 to 59 inches.....	1	35,762	1.88	.26	.26	2.40
60 to 71 inches.....	1	28,756	1.60	.33	.66	2.59
Total.....	13	595,078	1.91	.29	.40	2.60
<b>District No. 8:</b>						
36 to 47 inches.....	3	229,423	1.83	.34	.31	2.48
48 to 59 inches.....	15	1,557,882	1.02	.28	.33	1.63
60 to 71 inches.....	27	2,470,358	1.35	.33	.32	2.00
72 to 83 inches.....	1	98,235	1.32	.16	.13	1.61
Total.....	46	4,350,896	1.25	.32	.32	1.89
<b>District No. 9:</b>						
36 to 47 inches.....	1	43,552	2.30	.12	.52	2.94
60 to 71 inches.....	5	389,855	1.34	.26	.36	1.96
72 to 83 inches.....	1	97,226	1.51	.25	.26	2.02
Total.....	7	530,133	1.45	.25	.36	2.06

TABLE 19.—*Seam tabulation of "Revised" costs for 202 one-mine operators in Ohio—Continued.*

Thickness of seam.	Number of operators.	Production, 1913.	Costs.			
			Labor.	Supplies.	General expense.	Total f. o. b. mine.
State:		<i>Tons.</i>				
24 to 35 inches.....	13	514,473	\$1.88	\$0.33	\$0.45	\$2.66
36 to 47 inches.....	58	2,855,076	1.81	.29	.36	2.46
48 to 59 inches.....	69	5,355,003	1.44	.27	.32	2.03
60 to 71 inches.....	42	3,650,084	1.37	.31	.30	1.98
72 to 83 inches.....	17	1,104,418	1.42	.24	.36	2.02
84 to 95 inches.....	2	38,492	1.78	.27	.40	2.45
106 to 119 inches.....	1	11,615	1.60	.07	.59	2.26
Total.....	202	13,529,161	1.51	.29	.33	2.13

A summary of the principal facts relating to labor, supplies, and total f. o. b. mine cost of the 202 one-mine operators, arranged in comparative form for all districts, and for the State, is shown below:

Thickness of seam.	District No. 1.			District No. 2.			District No. 3.			District No. 3a.		
	Labor.	Supplies.	Total f. o. b. mine cost.	Labor.	Supplies.	Total f. o. b. mine cost.	Labor.	Supplies.	Total f. o. b. mine cost.	Labor.	Supplies.	Total f. o. b. mine cost.
24 to 35 inches.....				\$2.34	\$0.28	\$3.25						
36 to 47 inches.....	\$1.74	\$0.51	\$2.53	1.67	.21	2.29	\$1.61	\$0.30	\$2.19	\$1.74	\$0.18	\$2.78
48 to 59 inches.....	1.85	.23	2.56	2.00	.18	2.73	1.64	.20	2.17	1.48	.29	2.20
60 to 71 inches.....	1.66	.22	2.18				1.26	.33	1.90	1.51	.30	2.06
72 to 83 inches.....							1.52	.21	2.10	1.74	.20	2.12
84 to 95 inches.....							1.78	.27	2.45			
106 to 119 inches.....										1.60	.07	2.26
Total.....	1.77	.31	2.45	1.94	.23	2.67	1.58	.23	2.14	1.54	.25	2.25

Thickness of seam.	District No. 4.			District No. 5.			District No. 6.			District No. 7.		
	Labor.	Supplies.	Total f. o. b. mine cost.	Labor.	Supplies.	Total f. o. b. mine cost.	Labor.	Supplies.	Total f. o. b. mine cost.	Labor.	Supplies.	Total f. o. b. mine cost.
24 to 35 inches.....							\$1.56	\$0.37	\$2.24	\$1.98	\$0.29	\$2.79
36 to 47 inches.....	\$1.53	\$0.26	\$2.14	\$1.75	\$0.19	\$2.34	1.96	.29	2.65	1.93	.29	2.59
48 to 59 inches.....	1.51	.21	1.95	1.41	.39	2.16	1.61	.33	2.22	1.88	.26	2.40
60 to 71 inches.....	1.40	.18	1.75				1.38	.32	2.09	1.60	.33	2.59
72 to 83 inches.....	1.17	.35	1.98	1.79	.11	2.09						
84 to 95 inches.....												
106 to 119 inches.....												
Total.....	1.43	.24	1.95	1.63	.26	2.27	1.70	.32	2.34	1.91	.29	2.60

Thickness of seam.	District No. 8.			District No. 9.			State.		
	Labor.	Supplies.	Total f. o. b. mine cost.	Labor.	Supplies.	Total f. o. b. mine cost.	Labor.	Supplies.	Total f. o. b. mine cost.
24 to 35 inches.....							\$1.88	\$0.33	\$2.66
36 to 47 inches.....	\$1.83	\$0.34	\$2.48	\$2.30	\$0.12	\$2.94	1.81	.29	2.46
48 to 59 inches.....	1.02	.28	1.63				1.44	.27	2.03
60 to 71 inches.....	1.35	.33	2.00	1.34	.26	1.96	1.37	.31	1.98
72 to 83 inches.....	1.32	.16	1.61	1.51	.25	2.02	1.42	.24	2.02
84 to 95 inches.....							1.78	.27	2.45
106 to 119 inches.....							1.60	.07	2.26
Total.....	1.25	.32	1.89	1.45	.25	2.06	1.51	.29	2.13

For the State as a whole, there is shown both in Table 17 for all 256 operators and in Table 19, for the 202 one-mine operators, a decrease in the average labor cost per ton with the increase in the thickness of the seam, until seams 6 feet and over are reached. In seams 7 feet and over, the labor costs per ton are higher than seams between 4 and 7 feet thick. In many of the districts, however, there will be found exceptions to the general rule of decrease of labor costs per ton with increase of thickness of seam. These exceptions are due to special conditions encountered by the operators which obscure the effect on cost attributable to thickness of seam.

There is no close correlation shown between the various supplies costs and thickness of seam.

For District No. 8, returns were received from 10 operators who had strip pits. A comparison of the costs of these operators with those of the remaining 57 who operated deep mines (shaft, slope, or drift) is shown in the following table:<sup>1</sup>

TABLE 20.—Comparison of costs of strip pits and deep mines, in District No. 8, of Ohio in 1918.

Thickness of seam.	Strip pits.				Deep mines.			
	Number of operators.	Production, 1918.	Costs per ton.		Number of operators.	Production, 1918.	Costs per ton.	
			Labor.	Total, f. o. b. mine.			Labor.	Total, f. o. b. mine.
District No. 8:		<i>Tons.</i>				<i>Tons.</i>		
36 to 47 inches.....	1	22, 215	\$1. 91	\$2. 48	2	207, 208	\$1. 82	\$2. 48
48 to 50 inches.....	7	1, 967, 473	.73	1. 58	15	3, 072, 586	1. 31	1. 65
60 to 71 inches.....	2	140, 309	.77	1. 75	38	12, 195, 015	1. 28	1. 79
72 to 83 inches.....					2	1, 377, 837	1. 18	1. 84
Total.....	10	2, 135, 987	.74	1. 60	57	16, 852, 646	1. 28	1. 81

It will be noted that except for the one strip-pit operator in seams 36 to 47 inches thick, the average labor costs per ton of the strip-pit operators were much lower than those of the deep-mine operators working in the corresponding thickness of seam.

For the purpose of comparison with the above figures a similar table showing the costs of 4 strip-pit operators in Districts Nos. 3 and 6 (combined) in Illinois, and 101 deep-mine operators in those districts is here given:

<sup>1</sup> For similar figures for District No. 1 of Indiana, see p. 131.



Thickness of seam.	Strip pits.				Deep mines.			
	Number of operators.	Production, 1918.	Costs per ton.		Number of operators.	Production, 1918.	Costs per ton.	
			Labor.	Total, f. o. b. mine.			Labor.	Total, f. o. b. mine.
Districts Nos. 3 and 6 (combined):		<i>Tons.</i>				<i>Tons.</i>		
36 to 47 inches.....					1	52,573	\$3.18	\$4.15
48 to 59 inches.....					3	336,521	1.98	2.50
60 to 71 inches.....	2	298,995	\$0.72	\$1.16	29	8,485,146	1.67	1.99
72 to 83 inches.....	1	164,815	.57	.95	26	18,964,857	1.48	1.80
84 to 95 inches.....	1	276,076	1.36	1.86	14	10,885,476	1.35	1.71
96 to 107 inches.....					16	12,030,526	1.40	1.89
108 to 119 inches.....					10	5,618,042	1.47	1.92
120 to 131 inches.....					2	1,223,299	1.37	2.00
Total.....	4	740,486	.93	1.38	101	57,596,540	1.44	1.85

General expense is less affected than labor cost by conditions of a physical nature, like thickness of seam, but is closely connected with the commercial and financial economies of operation. The following comparison of the costs of the 202 one-mine operators with those of the 54 operators of two or more mines is of interest:

TABLE 21.—Comparison of average "Revised" costs: Operators of one mine with operators of two or more mines in Ohio.

District.	Number of operators.	Number of mines.	Output, 1918.			Costs per ton.			
			Total output.	Output per operator.	Output per mine.	Labor.	Supplies.	General expense.	Total f. o. b. mine.
No. 1:			<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>				
1 mine.....	8	8	629,411	78,676	78,676	(1)	(1)	(1)	(1)
2 or more mines.....	1	4	176,106	176,106	44,027	(1)	(1)	(1)	(1)
Total.....	9	12	805,517	89,502	67,126	(1)	(1)	(1)	(1)
No. 2:									
1 mine.....	17	17	505,875	29,757	29,757	\$1.94	\$0.23	\$0.50	\$2.67
2 or more mines.....	4	12	323,060	80,765	26,922	2.25	.23	.46	2.94
Total.....	21	29	828,935	39,473	28,584	2.06	.23	.48	2.77
No. 3:									
1 mine.....	31	31	2,141,031	69,066	69,066	1.58	.23	.33	2.14
2 or more mines.....	8	42	6,180,251	772,531	147,149	1.38	.23	.24	1.85
Total.....	39	73	8,321,282	213,364	113,990	1.43	.23	.27	1.93
No. 3a:									
1 mine.....	9	9	244,076	27,119	27,119	(1)	(1)	(1)	(1)
2 or more mines.....	1	3	31,733	31,733	10,578	(1)	(1)	(1)	(1)
Total.....	10	12	275,809	27,581	22,992	(1)	(1)	(1)	(1)
No. 4:									
1 mine.....	18	18	1,527,487	84,860	84,860	1.43	.24	.28	1.95
2 or more mines.....	2	6	615,743	307,872	102,624	1.63	.28	.38	2.29
Total.....	20	24	2,143,230	107,162	89,301	1.49	.26	.30	2.05
No. 5:									
1 mine.....	8	8	345,830	43,229	43,229	1.63	.26	.38	2.27
2 or more mines.....	2	4	131,032	65,516	32,758	1.55	.23	.26	2.04
Total.....	10	12	476,862	47,686	39,739	1.61	.25	.35	2.12

TABLE 21.—Comparison of average "Revised" costs: Operators of one mine with operators of two or more mines in Ohio—Continued.

District.	Number of operators.	Number of mines.	Output, 1918.			Costs per ton.			
			Total output.	Output per operator.	Output per mine.	Labor.	Supplies.	General expense.	Total f. o. b. mine.
No. 6:			<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>				
1 mine.....	45	45	2,659,342	59,096	59,096	\$1.70	\$0.32	\$0.32	\$2.34
2 or more mines.....	9	20	1,213,153	134,795	60,657	1.60	.35	.28	2.23
Total.....	54	65	3,872,495	71,713	59,577	1.67	.34	.30	2.31
No. 7:									
1 mine.....	13	13	595,078	45,775	45,775	1.91	.29	.40	2.60
2 or more mines.....	2	5	212,816	106,408	42,563	2.08	.19	.44	2.71
Total.....	15	18	807,894	53,860	44,939	1.96	.26	.41	2.63
No. 8:									
1 mine.....	46	46	4,350,898	94,585	94,585	1.25	.32	.32	1.89
2 or more mines.....	21	70	14,637,745	697,035	209,111	1.21	.26	.29	1.76
Total.....	67	116	18,988,643	283,413	163,695	1.22	.28	.29	1.79
No. 9:									
1 mine.....	7	7	530,133	75,733	75,733	1.45	.25	.36	2.06
2 or more mines.....	4	21	4,641,394	1,160,349	221,019	1.34	.20	.19	1.73
Total.....	11	28	5,171,527	470,139	191,912	1.35	.21	.20	1.76
State:									
1 mine.....	202	202	13,529,161	66,976	66,976	1.51	.29	.33	2.13
2 or more mines.....	54	187	28,163,033	521,538	150,604	1.32	.25	.27	1.84
Total.....	256	389	41,692,194	162,860	107,178	1.38	.26	.29	1.93

<sup>1</sup> To avoid identifying the costs of the operators of two or more mines in Districts Nos. 1 and 3a, the detail of costs for these districts is omitted.

In seven districts (Nos. 2, 3, 3a, 5, 6, 8, and 9) and for the State as a whole the general expense costs of operators of two or more mines were lower than those of the one-mine operators. In three districts (Nos. 1, 4, and 7) the general expense costs were higher for the operators of two or more mines than those for the one-mine operators.

### Part III.—COMPARATIVE COSTS AND SALES REALIZATIONS FOR 1916, 1917, AND 1918.

The Commission has obtained for the years 1916, 1917, and 1918 the costs and sales realizations of 46 operators. They mined about 18,000,000 tons annually. Part of the information which deals with the period prior to August, 1917, was obtained by accountants of the Commission directly from the records of the operators, at the request and with the cooperation of the Ohio State Council of Defense. The remainder of the information dealing with the period prior to August, 1917, was reported by the operators on the detailed cost forms prescribed by the Commission, in the support of applications to the Fuel Administration for revision of official maximum prices. The information for August, 1917–December, 1918, was obtained from the operators' reports made direct to the Commission on its prescribed cost forms.

#### 1. Representativeness of Statistics Presented.

In order that the costs and sales realizations of these 46 operators should be accepted as typical of the districts in which they mine, they must be shown to be of a fairly representative character. The following statement shows the proportion of the tonnage mined by these operators to the total commercial tonnage as derived from reports of the United States Geological Survey for 1916 and 1917, and the proportion mined by them to the total tonnage tabulated by the Commission for 1918:

District.	Number of operators.	Proportion of commercial tonnage reported by U. S. Geological Survey.		Proportion of tonnage reported by Federal Trade Commission.
		1916	1917	1918
		<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
No. 2.....	3	27.2	20.1	27.6
No. 3.....	6	46.1	34.4	32.8
No. 4 <sup>1</sup> .....	3	25.8	25.1	26.2
Nos. 5 and 9 (combined) <sup>1</sup> .....	5	106.5	104.5	84.2
No. 6.....	12	51.9	47.8	48.1
No. 7.....	3	39.4	38.2	50.1
No. 8 <sup>1</sup> .....	14	46.2	43.8	42.8

<sup>1</sup> The returns for one operator with mines in Districts 4, 5, and 8, who made but one return for all his mines combined, were included under Districts Nos. 5 and 9 (combined).

In respect to the quantity produced, the operators in the 1916–1918 tabulations produced a substantial proportion of the output in their

respective districts and in that respect can be considered representative.

The representativeness of the sales realizations in 1916 and 1917 of the 46 operators may be judged by comparison with the "average value per ton" figures derived for the districts from the Geological Survey reports for 1916 and 1917, by using value of tonnage "loaded at the mines for shipment" and "sold to local trade and used by employees."

District.	1916		1917	
	U. S. Geological Survey average value.	Federal Trade Commission sales realization.	U. S. Geological Survey average value.	Federal Trade Commission sales realization.
No. 2.....	\$1.66	\$1.79	\$2.62	\$2.91
No. 3.....	1.35	1.38	2.39	2.31
No. 4.....	1.32	1.51	2.44	2.51
Nos. 5 and 9 (combined).....	1.25	1.21	2.39	2.48
No. 6.....	1.41	1.51	2.67	2.88
No. 7.....	1.94	1.78	2.96	3.07
No. 8.....	1.28	1.32	2.46	2.46

A comparison of the average total f. o. b. mine costs and the average sales realizations of 204 operators in Districts Nos. 2, 3, 4, 5 and 9 (combined), 6, 7, and 8, with those of the 46 operators during August-December, 1917, follows:

District.	August-October, 1917.		November, 1917.		December, 1917.	
	Total f. o. b. mine cost.	Sales realization.	Total f. o. b. mine cost.	Sales realization.	Total f. o. b. mine cost.	Sales realization.
No. 2:						
26 operators.....	\$2.11	\$2.85	\$2.50	\$3.33	\$2.77	\$3.28
3 operators.....	2.82	2.76	2.81	3.59	3.12	3.70
No. 3:						
45 operators.....	1.55	2.51	1.95	2.54	2.14	2.53
6 operators.....	1.58	2.38	2.06	2.43	2.31	2.55
No. 4:						
12 operators.....	1.66	2.36	2.11	2.59	2.04	2.51
3 operators.....	1.47	2.38	1.85	2.63	1.98	2.69
Nos. 5 and 9 (combined):						
11 operators.....	1.41	2.72	1.79	2.84	1.96	2.69
5 operators.....	1.42	2.67	1.79	2.84	1.83	2.71
No. 6:						
42 operators.....	1.93	2.93	2.33	3.08	2.31	3.12
12 operators.....	1.81	2.96	2.27	3.17	2.24	3.12
No. 7:						
14 operators.....	2.19	3.14	2.56	3.46	2.77	3.52
3 operators.....	2.04	3.01	2.44	3.32	2.71	3.39
No. 8:						
54 operators.....	1.39	2.72	1.71	2.83	1.84	2.65
14 operators.....	1.41	2.56	1.76	2.70	1.86	2.55

A comparison of the average costs and sales realizations of the 46 operators with those of the 237 operators who produced 40,610,868 tons in the 8 districts in 1918 follows:

TABLE 22.—Comparison of average "Revised" costs and sales realizations per ton for 1918 of 21 operators with 3 operators in District No. 2 of Ohio.

Item.	January-March.		April-June.		July-September.		October-December.		Year.	
	21 operators.	3 operators.	21 operators.	3 operators.	21 operators.	3 operators.	21 operators.	3 operators.	21 operators.	3 operators.
Labor..... per ton..	\$2.07	\$2.31	\$2.00	\$2.24	\$2.00	\$2.15	\$2.20	\$2.32	\$2.06	\$2.24
Supplies..... do....	.19	.18	.22	.24	.22	.26	.31	.28	.23	.25
General expense..... do....	.49	.53	.48	.50	.42	.39	.56	.50	.48	.47
Total f. o. b. mine cost... do....	2.75	3.02	2.70	2.98	2.64	2.80	3.07	3.10	2.77	2.96
Sales realization..... do....	3.48	3.80	3.43	3.54	3.43	3.45	3.32	3.48	3.42	3.55

TABLE 23.—Comparison of average "Revised" costs and sales realizations per ton for 1918 of 39 operators with 6 operators in District No. 3 of Ohio.

Item.	January-March.		April-June.		July-September.		October-December.		Year.	
	39 operators.	6 operators.	39 operators.	6 operators.	39 operators.	6 operators.	39 operators.	6 operators.	39 operators.	6 operators.
Labor..... per ton..	\$1.41	\$1.48	\$1.38	\$1.43	\$1.43	\$1.46	\$1.54	\$1.56	\$1.43	\$1.48
Supplies..... do....	.21	.23	.23	.26	.21	.25	.27	.32	.23	.26
General expense..... do....	.26	.27	.25	.27	.24	.25	.32	.32	.27	.27
Total f. o. b. mine cost... do....	1.88	1.98	1.86	1.95	1.88	1.96	2.13	2.20	1.93	2.01
Sales realization..... do....	2.55	2.54	2.53	2.55	2.62	2.61	2.58	2.56	2.57	2.56

TABLE 24.—Comparison of average "Revised" costs and sales realizations per ton for 1918 of 20 operators with 3 operators in District No. 4 of Ohio.

Item.	January-March.		April-June.		July-September.		October-December.		Year.	
	20 operators.	3 operators.	20 operators.	3 operators.	20 operators.	3 operators.	20 operators.	3 operators.	20 operators.	3 operators.
Labor..... per ton..	\$1.47	\$1.48	\$1.46	\$1.46	\$1.45	\$1.47	\$1.58	\$1.52	\$1.49	\$1.48
Supplies..... do....	.25	.26	.27	.24	.23	.24	.27	.28	.26	.26
General expense..... do....	.30	.22	.30	.21	.29	.20	.33	.22	.30	.21
Total f. o. b. mine cost... do....	2.02	1.96	2.03	1.91	1.97	1.91	2.18	2.02	2.05	1.95
Sales realization..... do....	2.63	2.59	2.61	2.59	2.90	2.98	2.78	2.87	2.74	2.76

TABLE 25.—Comparison of average "Revised" costs and sales realizations per ton for 1918 of 21 operators with 5 operators in Districts Nos. 5 and 9 (combined) of Ohio.

Item.	January-March.		April-June.		July-September.		October-December.		Year.	
	21 operators.	5 operators.	21 operators.	5 operators.	21 operators.	5 operators.	21 operators.	5 operators.	21 operators.	5 operators.
Labor..... per ton..	\$1.37	\$1.35	\$1.33	\$1.31	\$1.35	\$1.32	\$1.43	\$1.39	\$1.37	\$1.34
Supplies..... do....	.19	.18	.19	.18	.22	.21	.26	.24	.21	.20
General expense..... do....	.22	.20	.21	.19	.21	.18	.23	.20	.22	.19
Total f. o. b. mine cost... do....	1.78	1.73	1.73	1.68	1.78	1.71	1.92	1.83	1.80	1.73
Sales realization..... do....	2.64	2.66	2.47	2.45	2.65	2.66	2.58	2.58	2.59	2.59

TABLE 26.—Comparison of average "Revised" costs and sales realizations per ton for 1918 of 54 operators with 12 operators in District No. 6 of Ohio.

Item.	January-March.		April-June.		July-September.		October-December.		Year.	
	54 operators.	12 operators.	54 operators.	12 operators.	54 operators.	12 operators.	54 operators.	12 operators.	54 operators.	12 operators.
Labor.....per ton..	\$1.64	\$1.55	\$1.63	\$1.52	\$1.65	\$1.51	\$1.78	\$1.69	\$1.67	\$1.56
Supplies.....do.....	.28	.28	.31	.31	.35	.38	.41	.46	.34	.36
General expense.....do.....	.30	.25	.29	.24	.27	.23	.34	.31	.30	.25
Total f. o. b. mine cost.....do.....	2.22	2.08	2.23	2.07	2.27	2.12	2.53	2.46	2.31	2.17
Sales realization.....do.....	2.94	2.92	2.74	2.75	2.96	2.99	2.91	2.94	2.89	2.90

TABLE 27.—Comparison of average "Revised" costs and sales realizations per ton for 1918 of 15 operators with 3 operators in District No. 7 of Ohio.

Item.	January-March.		April-June.		July-September.		October-December.		Year.	
	15 operators.	3 operators.	15 operators.	3 operators.	15 operators.	3 operators.	15 operators.	3 operators.	15 operators.	3 operators.
Labor.....per ton..	\$1.96	\$1.70	\$1.95	\$1.66	\$1.87	\$1.61	\$2.07	\$1.88	\$1.96	\$1.70
Supplies.....do.....	.28	.34	.28	.23	.22	.14	.26	.23	.26	.24
General expense.....do.....	.40	.37	.38	.34	.40	.37	.48	.44	.41	.38
Total f. o. b. mine cost.....do.....	2.64	2.41	2.61	2.23	2.49	2.12	2.81	2.55	2.63	2.32
Sales realization.....do.....	3.44	3.24	3.25	3.02	3.57	3.46	3.49	3.40	3.45	3.29

TABLE 28.—Comparison of average "Revised" costs and sales realizations per ton for 1918 of 67 operators with 14 operators in District No. 8 of Ohio.

Item.	January-March.		April-June.		July-September.		October-December.		Year.	
	67 operators.	14 operators.	67 operators.	14 operators.	67 operators.	14 operators.	67 operators.	14 operators.	67 operators.	14 operators.
Labor.....per ton..	\$1.28	\$1.27	\$1.17	\$1.22	\$1.19	\$1.22	\$1.26	\$1.31	\$1.22	\$1.25
Supplies.....do.....	.26	.27	.26	.27	.26	.26	.32	.29	.28	.28
General expense.....do.....	.31	.27	.27	.23	.28	.22	.33	.27	.29	.24
Total f. o. b. mine cost.....do.....	1.85	1.81	1.70	1.72	1.73	1.70	1.91	1.87	1.79	1.77
Sales realization.....do.....	2.62	2.53	2.40	2.40	2.51	2.48	2.44	2.40	2.49	2.45

In general there is a fairly close correspondence between the average sales realizations of the 46 operators and those of the 204 operators shown for the period August-December, 1917, and the 237 operators shown for the year 1918. In Districts Nos. 7 and 8, the sales realizations of the operators in the 1916-1918 tables averaged about 10 to 15 cents lower than those in the August-December, 1917, and the 1918 tabulations. In District No. 2 they averaged from 10 to 20 cents higher. There is a less close correspondence between the average f. o. b. mine costs, though in most of the districts this difference is not sufficient to affect the general representativeness of the figures. In

District No. 8, the average f. o. b. mine costs of the 14 operators in the 1916-1918 tables are substantially the same as those of the 54 operators for August-December, 1917, and the 67 operators for 1918. In Districts Nos. 2 and 3, the average f. o. b. mine costs of the operators shown in the 1916-1918 tables ranged generally from about 10 to 15 cents above, and in Districts Nos. 4, 5 and 9 (combined), and No. 6, they ranged from about 5 to 15 cents lower than the operators shown in the August-December, 1917, and in the 1918 tables. In District No. 7, the average f. o. b. mine costs of the 3 operators ranged from about 10 to 25 cents lower.

The figures for the 46 operators shown in the 1916-1918 tables can be accepted as generally typical for their entire districts with respect to the *relative changes* in costs and sales realizations from time to time, although in certain cases their average costs and sales realizations are slightly higher or lower than those for all operators in the respective districts.

Representative figures were not obtained by the Commission for costs and sales realizations in Districts Nos. 1 and 3a, of Ohio, prior to August, 1917. Use has, therefore, been made of the monthly reports covering the last five months of 1917. Nearly every one of the operators that appears in the 1917 appears also in the 1918 figures, but there are a few unimportant exceptions, which do not affect the general comparability of the 1917 figures with those of 1918. The average total f. o. b. mine costs, sales realizations and margins of about 80 per cent of the entire output mined in the two districts are presented.

## **2. The "Revised" Costs, Sales Realizations, and Production Figures and Analyses of the Fluctuations, by Districts, 1916-1918.**

The "Revised" costs and the sales realizations of the operators combined are shown in this section for different periods. The difference between the "Revised" and "Claimed" costs is so immaterial that only "Revised" costs are shown. In the upper division of Tables 32, 35, 38, 40, 42, 44, and 46 are shown the costs and sales realizations for the year 1916, and for each month of 1917 and 1918. In the second division, these costs and sales realizations are shown for periods of varying length, which correspond to the duration of certain conditions which had great influence on the costs and the sales realizations. In the third division of the tables are shown the figures by calendar years.

In Table 29 the distribution of the total f. o. b. mine costs and sales realizations, and in Table 30 the amounts by which the f. o. b. mine costs exceeded or were exceeded by the sales realizations are

shown for the year 1916 for Districts Nos. 2, 3, 4, 5 and 9 (combined), 6, 7, and 8.

TABLE 29.—*Distribution of total f. o. b. mine costs and sales realizations per ton of 46 operators in Ohio for the year 1916.*

10-cent groupings per ton.	District No. 2.		District No. 3.		District No. 4.		Districts Nos. 5 and 9 (combined).	
	Total f. o. b. mine cost.	Sales realization.	Total f. o. b. mine cost.	Sales realization.	Total f. o. b. mine cost.	Sales realization.	Total f. o. b. mine cost.	Sales realization.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
\$0.00-\$0.99.....			6.0					
1.00-1.09.....					51.3		68.7	7.7
1.10-1.19.....			55.4				25.4	6.0
1.20-1.29.....			35.8				7.9	87.3
1.30-1.39.....			2.8	79.5	43.4			
1.40-1.49.....				11.8		44.7		
1.50-1.59.....	80.3				5.3	55.3		
1.60-1.69.....		80.3		8.7				
1.70-1.79.....	18.3							
1.80-1.89.....	3.4							
1.90-1.99.....								
2.00-2.09.....								
2.10-2.19.....								
2.20-2.29.....		16.3						
2.30-2.39.....								
2.40-2.49.....		3.4						
2.50-2.59.....								
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

10-cent groupings per ton.	District No. 6.		District No. 7.		District No. 8.	
	Total f. o. b. mine cost.	Sales realization.	Total f. o. b. mine cost.	Sales realization.	Total f. o. b. mine cost.	Sales realization.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
\$0.00-\$0.99.....					50.0	
1.00-1.09.....	44.8				48.8	2.2
1.10-1.19.....	8.4				2.8	2.7
1.20-1.29.....	8.1		40.2		2.6	45.3
1.30-1.39.....	31.1	16.5		48.3		25.9
1.40-1.49.....	7.6	41.4	13.8			23.1
1.50-1.59.....		17.9				
1.60-1.69.....		11.7	40.0			
1.70-1.79.....		9.3		13.8		
1.80-1.89.....					0.8	
1.90-1.99.....		3.2				
2.00-2.09.....						
2.10-2.19.....						
2.20-2.29.....						
2.30-2.39.....				39.9		
2.40-2.49.....						
2.50-2.59.....						0.8
Total.....	100.0	100.0	100.0	100.0	100.0	100.0



TABLE 30.—*Distribution of the amounts per ton by which the total f. o. b. mine costs exceeded or were exceeded by the sales realizations of 46 operators in Ohio for the year 1916.*

5-cent groupings per ton.	Districts.						
	No. 2.	No. 3.	No. 4.	Nos. 5 and 9 (com- bined).	No. 6.	No. 7.	No. 8.
Total f. o. b. mine costs exceeded sales realizations by:	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
5-9 cents.....							0.4
0-4 cents.....							
Total.....							0.4
Sales realizations exceeded total f. o. b. mine costs by:							
0-4 cents.....			5.2				
5-9 cents.....	80.3	2.8			7.9	46.3	2.2
10-14 cents.....		26.8	44.7	5.0	18.4		2.2
15-19 cents.....		55.7		36.0	4.7		
20-24 cents.....				69.0	11.7		20.5
25 cents or more.....	19.7	14.7	50.1		57.3	63.7	74.7
Total.....	100.0	100.0	100.0	100.0	100.0	100.0	99.6
Grand total.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0

## DISTRICT NO. 1.

The significance of the 8 periods selected for presenting the figures for August, 1917–December, 1918, for District No. 1, is as follows:

*August, 1917.*—The greater part of this month was prior to the fixing, by Executive order of August 21, 1917, of maximum prices for bituminous coal not sold under contracts made prior to that date, and the establishment of a Fuel Administration to regulate the fuel situation.

*September–October, 1917.*—This period directly followed the official price-fixing of August 21, 1917.

*November–December, 1917.*—This period directly followed the increase in maximum prices allowed by Executive order in consequence of the adoption of a new wage scale (1917–1918) which was higher than that adopted earlier in 1917.

*January–March, 1918.*—Many of the contracts made prior to August 21, 1917, expired on March 31, 1918. The wage scale of 1917–1918 continued in operation.

*April–May, 1918.*—Beginning with this period practically the entire output of coal, whether sold under contract or not, was subject to the governmental maximum prices.

*June, 1918.*—This period followed the reduction made by the Fuel Administration of 10 cents per ton, effective May 25, 1918, in the maximum prices for the district.

*July–August, 1918.*—This period followed the increase in maximum prices effective June 29, 1918, allowed for this district by the Fuel Administration.

*September-December, 1918.*—This period followed the reduction by the Fuel Administration of 5 cents per ton, effective August 23, 1918, in the maximum prices for the district.

TABLE 31.—“Revised” costs and sales realizations of operators in District No. 1 of Ohio, producing about 70 per cent of the entire output, August, 1917-December, 1918.

Period.	Number of operators.	Production.	Total f. o. b. mine cost per ton.	Sales realization per ton.	Margin per ton.
		<i>Tons.</i>			
August, 1917.....	13	116,483	\$1.74	\$2.98	\$1.24
September-October, 1917.....	13	209,070	1.96	2.98	1.02
November-December, 1917.....	13	181,963	2.38	2.90	.52
January-March, 1918.....	9	211,688	2.30	2.76	.46
April-May, 1918.....	9	134,269	2.52	2.83	.31
June, 1918.....	9	69,760	2.42	2.75	.33
July-August, 1918.....	9	153,476	2.46	2.83	.37
September-December, 1918.....	9	236,324	2.67	2.82	.15

On August 21, 1917, the Government first fixed prices under the Lever Act. The prices fixed by Executive order for the sale of coal not then under contract in this district on August 21, 1917, were as follows: “*Thin Vein*,” run of mine, \$2.35; prepared sizes, \$2.60; slack, \$2.10: “*Thick Vein*,” run of mine, \$2; prepared sizes, \$2.25; slack, \$1.75. The average proportions which these three classes of coal form of the total output, based on actual returns for all operators in this district who reported to the Federal Trade Commission during the period August-December, 1917, are as follows: run of mine, 27 per cent; prepared sizes, 52 per cent; slack, 21 per cent. Had the entire output of the 13 operators been sold at the prices established August 21, 1917, for *thin vein*, it would have brought them a sales realization of \$2.43 per ton. Had it been sold at the *thick vein* prices it would have brought them a sales realization of \$2.08 per ton. As will be seen from Table 18, (see p. 55) 47 per cent of the output from this district in 1918 came from seams between 3 and 4 feet thick, and 53 per cent from seams 4 feet and over in thickness. The 13 operators *actually* received, during September-October, 1917, a sales realization of \$2.98 per ton, which was what they had also received in August. Their average total f. o. b. mine cost was, for September-October, \$1.96 per ton, an increase of 22 cents over that of August, while their average monthly tonnage was 104,535 tons, a decrease from that of August (116,483 tons). Their margin during September-October was \$1.02 per ton, a decrease of 22 cents from August.

Effective November 1, 1917, a 45-cent increase in the established maximum prices was allowed by Executive order, to take care of an increase in the wage scale which went into effect at that time. The average f. o. b. mine cost of the 13 operators for November-December, 1917 (\$2.38 per ton) increased 42 cents over that for September-October, 1917, a part of this increase being attributable to the higher

wage scale, and a part to the decrease in the output (to an average of 90,982 tons per month). Their average sales realization for November-December, 1917, was \$2.90, a decrease of 8 cents, and their margin 52 cents per ton, a decrease of 50 cents.

During the period January-March, 1918, the average total f. o. b. mine cost of the 9 operators who reported for the 12 months in 1918 was \$2.30, their sales realization \$2.76, and their margin 46 cents per ton. On March 31, 1918, most of the contracts entered into before August 21, 1917, expired. For the period April-May, 1918, the average f. o. b. mine cost of the 9 operators was \$2.52 per ton, their sales realization \$2.83, and their margin 31 cents per ton. Their average monthly production for April-May was 67,134 tons as compared with 70,563 tons, their average production for January-March. Effective May 25, 1918, the Fuel Administration made a reduction of 10 cents per ton in the existing maximum prices for this district. The *actual* sales realization for the 9 operators during June was \$2.75 per ton, a decrease of 8 cents from that for April-May. Their total f. o. b. mine cost for June was \$2.42 per ton, a decrease of 10 cents, and their margin was 33 cents per ton, an increase of 2 cents, over April-May. The June tonnage was 69,760 tons, also an increase. Effective June 29, 1918, the Fuel Administration established new maximum prices for this district. No distinction was made between the output from thin and thick veins. The new prices were (inclusive of the 45-cent price increase of November 1, 1917, because of the wage increase): Run of mine, \$2.80; prepared sizes, \$3.05; slack, \$2.55. Applying the proportions of these classes of coal already stated for the district, the 9 operators would have received, had they sold their entire output at the new prices, a possible sales realization of \$2.88 per ton. They *actually* received, during July and August, 1918, an average sales realization of \$2.83 per ton, an increase of 8 cents over the realization for June. Their average f. o. b. mine cost was \$2.46 and their margin 37 cents per ton. Effective August 23, 1918, the Fuel Administration made a reduction of 5 cents per ton in the then existing maximum prices for the district. The *actual* average sales realization of the 9 operators for September-December, 1918, was \$2.82 per ton. Their average total f. o. b. mine cost was \$2.67 per ton, an increase of 21 cents, and their margin was 15 cents per ton, a decrease of 22 cents. Their average monthly production was 59,081 tons, a marked decrease from that for July-August, which averaged 76,738 tons.

#### DISTRICT NO. 2.

The significance of the 10 periods selected for presenting the figures for 1916-1918 for District No. 2 is as follows:

*Year 1916.*—This period reflects the situation for the calendar year prior to the entrance of the United States into the war. Only the figures for 1916 as a whole were obtained for District No. 2.

*January–March, 1917.*—During this period the 1916 wage scale was still in operation, and much coal was being sold on contracts based on that wage scale. Most of these contracts expired on March 31. The imminence of war affected prices much more than costs.

*April–August, 1917.*—War was begun and during this period the higher 1917 wage scale was in operation. The contracts for the sale of coal entered into were generally at much higher prices than previous contracts, while the “spot” market advanced very sharply.

*September–October, 1917.*—This period directly followed the fixing, by Executive order of August 21, 1917, of maximum prices for bituminous coal not sold under contracts made prior to that date and the establishment of a Fuel Administration to regulate the fuel situation. The 1917 wage scale continued in operation during these two months.

*November, 1917–January, 1918.*—This period directly followed the increase in the maximum prices, allowed by Executive order to the entire district, in consequence of the adoption of a new wage scale (1917–1918), which was higher than that adopted earlier in 1917. Effective November 6, 1917, an increase in maximum prices was allowed by the Fuel Administration for the output of mines located in the Jackson field, a part of the area included in District No. 2.

*February–March, 1918.*—This period followed the decrease in maximum prices, effective January 23, 1918, made by the Fuel Administration for the output of mines located in the Jackson field.

*April–May, 1918.*—Beginning with April 1, 1918, practically the entire output of coal, whether sold under contract or not, was subject to the governmental maximum prices. The 1917–1918 wage scale continued in operation.

*June, 1918.*—Effective May 25, 1918, the Fuel Administration ordered a reduction of 10 cents per ton in the then existing maximum prices in this district.

*July–August, 1918.*—Effective June 29, 1918, the Fuel Administration established new maximum prices, which uniformly applied to the entire output of the district.

*September–December, 1918.*—Effective August 23, 1918, the Fuel Administration made a reduction of 5 cents per ton in the then existing maximum prices established for the district.

TABLE 32.—“Revised” costs and sales realizations of 3 operators mining about 250,000 tons annually in District No. 2 of Ohio, 1916–1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
Year 1916.....	Tons. 256,701	\$1.19	\$0.14	\$0.29	\$1.62	\$1.79	\$0.17
1917.							
January.....	23,888	1.24	.23	.27	1.74	2.81	1.07
February.....	23,256	1.24	.12	.28	1.64	3.01	1.37
March.....	24,053	1.30	.12	.31	1.73	2.35	.62
April.....	20,363	1.43	.21	.31	1.95	2.25	.30
May.....	20,628	1.64	.24	.32	2.20	2.99	.79
June.....	19,881	1.67	.33	.32	2.32	3.24	.92
July.....	16,811	1.74	.39	.39	2.52	2.96	.44
August.....	20,781	1.73	.20	.32	2.25	2.87	.62
September.....	16,503	1.87	.17	.42	2.46	2.70	.24
October.....	21,176	1.76	.14	.38	2.28	2.70	.42
November.....	21,523	2.16	.25	.40	2.81	3.59	.78
December.....	17,081	2.37	.24	.51	3.12	3.70	.58
1918.							
January.....	14,516	2.48	.21	.56	3.25	3.71	.46
February.....	14,258	2.42	.16	.63	3.21	3.89	.68
March.....	18,760	2.09	.17	.43	2.69	3.81	1.12
April.....	14,580	2.32	.20	.57	3.09	3.62	.53
May.....	18,984	2.10	.26	.46	2.82	3.47	.65
June.....	16,972	2.32	.25	.49	3.06	3.55	.49
July.....	22,631	2.10	.35	.40	2.85	3.43	.58
August.....	26,875	2.21	.20	.36	2.77	3.48	.71
September.....	23,089	2.13	.25	.41	2.79	3.43	.64
October.....	23,230	2.14	.20	.40	2.74	3.46	.72
November.....	17,760	2.44	.36	.58	3.38	3.55	.17
December.....	17,332	2.42	.33	.56	3.31	3.44	.13
Year 1916.....	256,701	1.19	.14	.29	1.62	1.79	.17
January–March, 1917.....	71,197	1.26	.16	.29	1.71	2.72	1.01
April–August, 1917.....	98,464	1.64	.27	.33	2.24	2.85	.61
September–October, 1917.....	37,679	1.81	.15	.39	2.35	2.70	.35
November, 1917–January, 1918.....	53,120	2.32	.23	.48	3.03	3.66	.63
February–March, 1918.....	33,018	2.24	.16	.51	2.91	3.84	.98
April–May, 1918.....	33,564	2.19	.24	.51	2.94	3.53	.59
June, 1918.....	16,972	2.32	.25	.49	3.06	3.55	.49
July–August, 1918.....	49,506	2.16	.27	.38	2.81	3.46	.65
September–December, 1918.....	81,411	2.26	.27	.48	3.01	3.47	.46
Year 1916.....	256,701	1.19	.14	.29	1.62	1.79	.17
Year 1917.....	245,944	1.65	.21	.35	2.21	2.91	.70
Year 1918.....	228,987	2.24	.25	.47	2.96	3.55	.59

TABLE 33.—“Revised” costs and sales realizations of 6 operators mining about 400,000 tons annually in District No. 2 of Ohio, 1917–1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
1917.	Tons.						
January.....	44,715	\$1.22	\$0.18	\$0.31	\$1.71	\$3.14	\$1.43
February.....	40,207	1.27	.13	.35	1.75	3.35	1.60
March.....	45,066	1.29	.17	.37	1.83	2.55	.72
April.....	37,120	1.49	.22	.39	2.10	2.46	.36
May.....	45,923	1.47	.24	.35	2.06	3.11	1.05
June.....	43,711	1.59	.30	.37	2.26	3.60	1.34
July.....	42,336	1.53	.30	.49	2.32	3.15	.83
August.....	46,690	1.58	.28	.33	2.19	3.13	.94
September.....	37,759	1.65	.34	.40	2.39	2.97	.58
October.....	44,104	1.66	.29	.38	2.33	2.92	.59
November.....	43,769	2.11	.34	.41	2.86	3.46	.60
December.....	35,367	2.19	.47	.51	3.17	3.45	.28

TABLE 33.—“Revised” costs and sales realizations of 6 operators mining about 400,000 tons annually in District No. 2 of Ohio, 1917-1918—Continued.

Period.	Production.	Cost per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
1918.	<i>Tons.</i>						
January.....	21,368	\$2.52	\$0.24	\$0.58	\$3.54	\$3.73	\$0.19
February.....	20,989	2.44	.18	.62	3.24	3.85	.61
March.....	30,421	2.12	.19	.47	2.78	3.78	1.00
April.....	25,180	2.33	.24	.56	3.13	3.68	.55
May.....	31,874	2.10	.22	.47	2.79	3.48	.69
June.....	28,421	2.29	.29	.51	3.09	3.54	.45
July.....	32,605	2.15	.31	.45	2.91	3.45	.54
August.....	33,914	2.31	.23	.44	2.98	3.50	.52
September.....	30,424	2.20	.32	.47	2.99	3.40	.41
October.....	30,899	2.20	.24	.45	2.89	3.43	.54
November.....	25,480	2.46	.37	.59	3.42	3.47	.05
December.....	23,783	2.49	.46	.62	3.57	3.47	1.10
January-March, 1917.....	129,988	1.26	.16	.34	1.76	3.00	1.24
April-August, 1917.....	215,790	1.63	.27	.39	2.19	3.11	.92
September-October, 1917.....	81,863	1.66	.31	.39	2.36	2.94	.58
November, 1917-January, 1918	100,504	2.23	.36	.48	3.07	3.51	.44
February-March, 1918.....	51,410	2.25	.19	.53	2.97	3.81	.84
April-May, 1918.....	57,054	2.21	.22	.51	3.00	3.57	.57
June, 1918.....	28,421	2.29	.29	.51	3.09	3.54	.45
July-August, 1918.....	66,519	2.24	.27	.44	2.95	3.47	.52
September-December, 1918...	110,546	2.33	.34	.52	3.19	3.44	.25
Year, 1917.....	506,767	1.58	.27	.38	2.23	3.11	.88
Year, 1918.....	335,358	2.28	.27	.51	3.06	3.55	.49

<sup>1</sup> Amount by which the sales realization was less than the total f. o. b. mine cost.

For three operators in District No. 2 it was possible to get information for 1916-1918. This is shown in Table 32. For three more operators, information was available for 1917 and 1918. Table 33 presents the combined figures for the six operators for 1917 and 1918, including, therefore, the three shown in Table 32. The information in Table 33 is more representative of conditions for the district for 1918 (and presumably 1917) than is that in Table 32. On the other hand, the figures in Table 33 furnish no basis for comparison with 1916. Accordingly, in this analysis of conditions in District No. 2, use will be made, whenever necessary, of the information contained in both tables. The information appearing in the first two divisions of Table 32 is shown in graphic form in Chart 4 (opposite p. 74).

Costs and sales realizations for the three operators in Table 32 were not obtained by months for 1916, but are combined figures for the calendar year. Their average labor cost for the year was \$1.19 per ton; total f. o. b. mine cost, \$1.62; sales realization, \$1.79; and margin, 17 cents per ton.

From January, 1917 on, the Commission presents monthly figures. The first quarter of 1917 showed the effect of the increased demand for coal on the "spot" market, in a margin for the three operators in Table 32, of \$1.01 per ton, a marked increase over the average margin (17

cents), which they obtained in 1916. Their average total f. o. b. mine cost during January–March, 1917, was \$1.71 per ton. The drop in sales realization from \$3.01 per ton in February to \$2.35 in March is probably due to the shipping out of coal to complete delivery on relatively low-priced contracts. The average sales realization of the three operators for the period January–March, 1917, was \$2.72 per ton. During the period April–August, 1917, the average labor cost for the three operators in Table 32 was \$1.64 per ton, an increase of 38 cents over their average (\$1.26 per ton) for January–March, 1917. Part of this increase is attributable to the higher wage scale which became effective April 1, 1917, and a part to a decrease in production, which averaged 23,732 tons per month during January–March, 1917, and 19,693 tons during April–August, 1917.

On March 31, 1917, most of the contracts made early in 1916 expired. The sales realization of the three operators instead of rising, however, was \$2.25 per ton in April, 10 cents lower than in March. This is probably to be attributed principally to the shipping out of delayed tonnage due to complete the 1916 contracts, and perhaps also partly to some slackening in demand, due to a hope on the part of buyers in this market, of a future fall in prices. In May, 1917, the sales realization rose to \$2.99 per ton and in June, 1917, reached \$3.24 per ton. It then dropped 28 cents to \$2.96 in July. This decrease is attributable in some measure to the public agitation over the high prices, one of the effects of which was the so-called “voluntary reduction” agreed upon at the operators’ conference in Washington early in July. For the five-month period April–August, 1917, the sales realization averaged \$2.85 per ton and the margin 61 cents per ton.

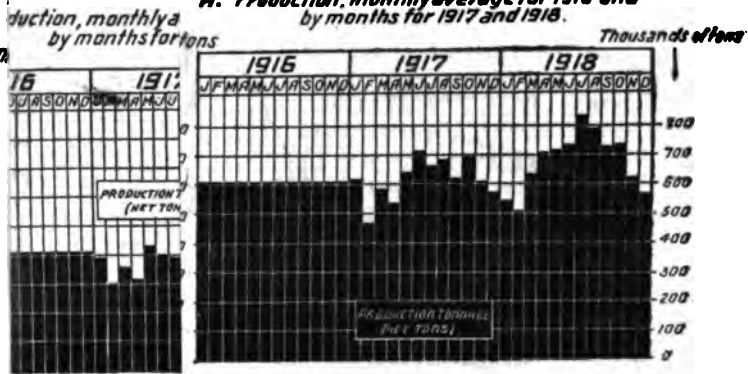
On August 21, 1917, the Government first fixed prices under the Lever Act. The prices fixed by Executive order for the sale of coal not then under contract in this district on August 21, 1917, were as follows: “*Thin Vein*,” run of mine, \$2.35; prepared sizes, \$2.60; slack, \$2.10; “*Thick Vein*,” run of mine, \$2; prepared sizes, \$2.25; slack, \$1.75. The average proportions which these three classes of coal form of the total output, based on actual returns for all operators in this district who reported to the Federal Trade Commission during the period August–December, 1917, are as follows: run of mine, 77 per cent; prepared sizes, 19 per cent; slack, 4 per cent. Had the entire output of the three operators been sold at the prices established August 21, 1917, for *thin vein*, it would have brought them a sales realization of \$2.39 per ton. Had it been sold at the *thick vein* prices, it would have brought them a sales realization of \$2.04 per ton. The three operators in Table 31 *actually* received a sales realization of \$2.70 per ton both during September and during October. This decrease of 17 cents from their August sales realization (\$2.87

# INDOUB C

**77** Production  
Jan. 1916 - Dec. 1918  
7,500,000 tons annually.

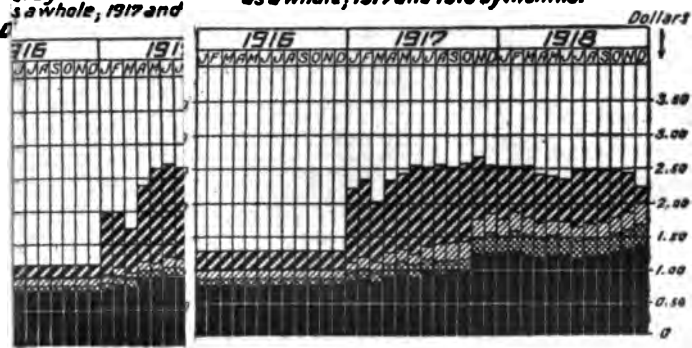
**CHART 10** Production, average Costs and Sales  
Realizations Jan. 1916 - Dec. 1918 of Operators produ-  
cing about 7,500,000 tons annually in District No. 6.

**A. Production, monthly average for 1916 and  
by months for 1917 and 1918.**



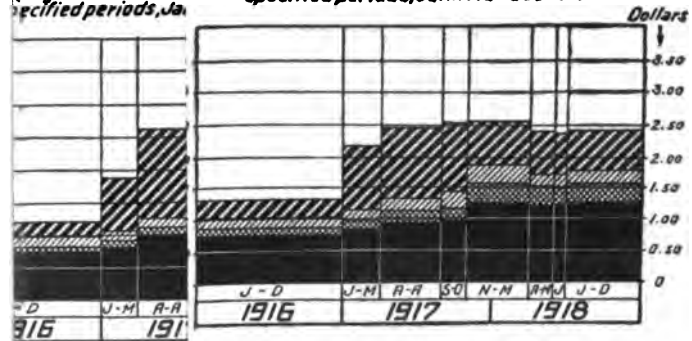
**8** Average Costs and Sales  
as a whole, 1917 and 1918

**B. Average Costs and Sales Realizations 1916  
as a whole, 1917 and 1918 by months.**



**9** Average Costs and Sales  
specified periods, Jan. 1916 - Dec. 1918.

**C. Average Costs and Sales Realizations by  
specified periods, Jan. 1916 - Dec. 1918.**





Source: *Journal of the Royal Society of Medicine*  
 Vol. 10, No. 1, 1917, p. 10.

Source: *Journal of the Royal Society of Medicine*  
 Vol. 10, No. 1, 1917, p. 10.

Source: *Journal of the Royal Society of Medicine*  
 Vol. 10, No. 1, 1917, p. 10.

Source: *Journal of the Royal Society of Medicine*  
 Vol. 10, No. 1, 1917, p. 10.



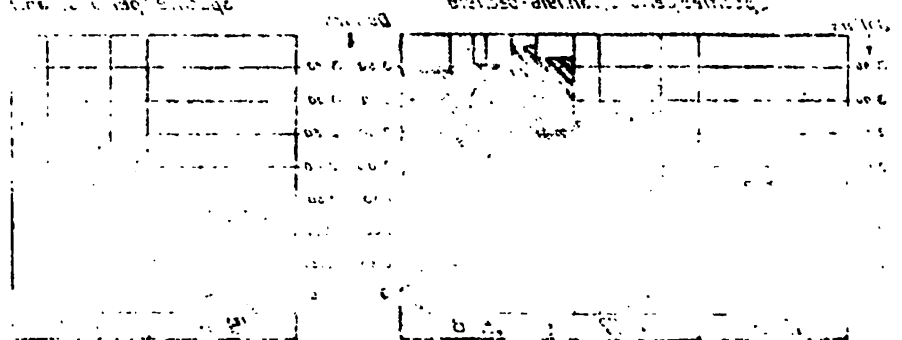
Source: *Journal of the Royal Society of Medicine*  
 Vol. 10, No. 1, 1917, p. 10.

Source: *Journal of the Royal Society of Medicine*  
 Vol. 10, No. 1, 1917, p. 10.



Source: *Journal of the Royal Society of Medicine*  
 Vol. 10, No. 1, 1917, p. 10.

Source: *Journal of the Royal Society of Medicine*  
 Vol. 10, No. 1, 1917, p. 10.



per ton) is attributable chiefly to the effect of the governmental price regulation. The average f. o. b. mine cost of the three operators during September–October was \$2.35 per ton, an increase of 11 cents over that for April–August, 1917. Their average monthly production was 18,840 tons, a decrease from that of April–August, 1917, which averaged 19,693 tons. The average margin of the three operators for September–October was 35 cents.

The distribution of the total f. o. b. mine cost for 26 operators who mined 226,305 tons in District No. 2 during the three months of August–October, 1917, is shown in the following table:

TABLE 34.—Total f. o. b. mine costs of 26 operators in District No. 2 in the State of Ohio during August–October, 1917.

Total f. o. b. mine cost per ton by \$0.10 groupings.	Number of oper- ators.	Accum- ulated per cent of output.	Total f. o. b. mine cost per ton by \$0.10 groupings.	Number of oper- ators.	Accum- ulated per cent of output.
\$1.60 to \$1.69.....	1	3.4	\$2.30 to \$2.39.....	2	82.8
\$1.70 to \$1.79.....	2	18.5	\$2.40 to \$2.49.....	3	88.6
\$1.80 to \$1.89.....	3	32.9	\$2.50 to \$2.59.....	2	91.2
\$1.90 to \$1.99.....	1	34.7	\$2.60 to \$2.69.....	1	96.1
\$2.00 to \$2.09.....	3	49.9	\$2.70 to \$2.79.....	2	100.0
\$2.10 to \$2.19.....	3	51.9			
\$2.20 to \$2.29.....	3	78.0	Total.....	26	100.0

The above table shows that had the operators sold their entire output at the prices fixed for *thin vein* by the President on August 21, 1917, about 44 per cent of the output would have shown a margin of 25 cents or over per ton. As will be seen from Table 18 (see p. 55), 96 per cent of the output from this district in 1918 came from seams which averaged under 4 feet in thickness. The 26 operators *actually* received a sales realization, during August–October, 1917, of \$2.85 per ton, which left them an average margin of 74 cents per ton over their average f. o. b. mine cost of \$2.11 per ton.

A comparison of the statistics appearing in Table 33 with those in Table 32 shows that while for the first 10 months of 1917 the total f. o. b. mine costs were in general about the same for the six operators as for the three operators, that the sales realizations and margins shown for the six operators in Table 33 run about 25 cents per ton in excess of those shown for the three operators. As already pointed out, the statistics in Table 33 for the six operators are probably much more representative of conditions in the district during 1917 than the statistics covering the three operators in Table 32.

Effective November 1, 1917, a 45-cent increase in the price of noncontracted coal was allowed by Executive order to take care of an increase in the wage scale which went into effect at that time. The average labor cost (\$2.32 per ton) for the period November, 1917–January, 1918, for the three operators shown in Table 32, increased

51 cents per ton over that (\$1.81 per ton) for September-October, 1917. A portion of this increase is attributable to the higher wages scale, and a portion to the decrease in the average monthly tonnage, which was 17,707 tons in November, 1917-January, 1918, as compared with 18,840 tons during September-October, 1917. Effective November 6, 1917, the Fuel Administration fixed for the output of mines in the Jackson Field, maximum prices, inclusive of the 45-cent price increase of November 1, as follows: run of mine, \$4.20; prepared sizes, \$4.45; slack, \$3.95. Since 20 of the 21 operators tabulated, and 96 per cent of the entire output shown for District No. 2, in 1918, belonged in the Jackson Field, the prices effective November 6, 1917, can be considered as applying virtually to the entire district. Had the operators sold their entire output at the new maximum prices, the operators in this district would have received, using the already stated percentages of run of mine, prepared sizes and slack coal, a possible realization of \$4.24 per ton. During the period November, 1917-January, 1918, the three operators in Table 31 *actually* received a sales realization of \$3.66 per ton, an increase of 96 cents over that for September-October, 1917 (\$2.70 per ton). This increase is attributable to the effect of the new official maximum prices. The margin during November, 1917-January, 1918, was 63 cents per ton, an increase of 28 cents over that of September-October, 1917. Effective January 23, 1918, the Fuel Administration made a reduction of 50 cents per ton in the maximum prices allowed for the Jackson Field. This made a possible realization of \$3.74 per ton, had the entire output been sold at the new prices. The reduction did not have any effect on the average sales realization of the three operators for February-March, 1918, which was \$3.84 per ton, an increase of 18 cents over that for November, 1917-January, 1918. Their total f. o. b. mine cost for February-March, 1918, was \$2.91 per ton, a decrease of 12 cents from the average for November, 1917-January, 1918 (\$3.03 per ton). The production also decreased, averaging 16,509 tons per month for February and March, 1918. Apparently the decrease in production was offset by a decrease in the supplies and in the labor cost, which were unusually high during November, December, and January. The margin of the three operators for February-March, 1918, was 93 cents per ton, an increase of 30 cents over the preceding period.

On April 1, 1918, practically the entire output of the district came under governmental regulation, most of the contracts entered into before August 21, 1917, having expired. The average total f. o. b. mine cost for the three operators during April-May, 1918, was \$2.94 per ton (an increase of 3 cents per ton over February-March). This increase was not due to the labor cost, which decreased 5 cents per ton, but to the supplies cost, which increased 8 cents per ton

(from 16 to 24 cents). The average monthly production, 16,782 tons, was practically that of the preceding period (16,509 tons). The average sales realization for the three operators during April-May, 1918, was \$3.53 (a decrease of 31 cents), and the margin was 59 cents per ton (a decrease of 34 cents). Effective May 25, 1918, the Fuel Administration made a reduction of 10 cents per ton in the existing maximum prices for the district. The sales realization during June, 1918 (following the May 25 price reduction), was \$3.55 per ton. Since the possible sales realization, had the entire output been sold at the official prices established May 25, was \$3.64 per ton, the official reduction of maximum prices had little effect on the *actual* realization. The total f. o. b. mine cost of the three operators for June was \$3.06 per ton, and their margin 49 cents per ton. The production increased slightly over the average for April-May.

Effective June 29, 1918, new maximum prices were established by the Fuel Administration, to apply to all operators in the district, whether in or out of the Jackson Field. These new prices, including the 45-cent price increase because of the November, 1917, wage increase, were as follows: run of mine, \$3.45; prepared sizes, \$3.70; slack, \$3.30. Had the operators sold their entire output at the new prices, they would have received a possible sales realization of \$3.49 per ton, using the already-stated percentages of run of mine, prepared sizes, and slack coal. The three operators in Table 32 *actually* received an average sales realization during July-August, 1918, of \$3.46 per ton, a decrease of 9 cents per ton from the June sales realization. This decrease is attributable to the effect of the reduction made June 29, in official maximum prices. The average total f. o. b. mine cost for the three operators during July-August, 1918, was \$2.81 per ton, a decrease of 25 cents from that for June. The production increased markedly, averaging 24,753 tons per month for July-August, 1918, as compared with 16,972 tons in June. Their margin for July-August, 1918, was 65 cents per ton, an increase of 16 cents over that for June. Effective August 23, 1918, the Fuel Administration made a reduction of 5 cents per ton in the existing maximum prices for this district. The average sales realization of the three operators for September-December, 1918, was \$3.47 per ton, an increase of 1 cent per ton over that for July-August, 1918. The average total f. o. b. mine cost of the three operators during September-December, 1918, was \$3.01, an increase of 20 cents. This is principally attributable to the decreased production, which averaged 20,353 tons per month, as compared with 24,753 tons per month during July-August, 1918. The production which was 23,230 tons in October, fell to 17,760 tons in November, and 17,332 tons in December. This decrease is chiefly attributable to the influenza epidemic, and to the falling off in demand following the Armistice.

The average margin for the three operators for September-December, 1918, was 46 cents per ton. It fell from 72 cents per ton in October to 17 cents in November, and 13 cents in December.

A comparison of the statistics from November, 1917, to December, 1918, appearing for the six operators in Table 33 with those of the three operators in Table 32, for the same time, shows that in general the total f. o. b. mine costs of the six operators were somewhat higher than those of the three operators, and their sales realizations somewhat lower. The margins of the six operators were, on the average, about 15 cents per ton less than those of the three operators. As has already been pointed out, the statistics for the six operators shown in Table 33 are to be considered more representative of the district, during 1918, than those for the three operators shown in Table 32.

### DISTRICT NO. 3.

The significance of the nine periods selected for presenting the figures for 1916-1918 for District No. 3 is as follows:

The descriptions of the first four periods (year 1916, January-March, 1917, April-August, 1917, and September-October, 1917), have already been given in connection with District No. 2 (see pp. 70-71) and need no repetition.

*November, 1917-March, 1918.*—This period directly follows the increase in the maximum prices allowed by Executive order in consequence of the adoption of a new wage scale (1917-1918), which was higher than that adopted earlier in 1917. Many of the contracts made prior to August 21, 1917, continued through this period.

The descriptions of the last four periods (April-May, 1918, June, 1918, July-August, 1918, and September-December, 1918), have already been given in connection with District No. 2.

TABLE 35.—“Revised” costs and sales realizations of 6 operators mining about 2,750,000 tons annually in District No. 3 of Ohio, 1916-1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
1916.							
Year .....	Tons. 2,502,375	\$0.84	\$0.11	\$0.22	\$1.17	\$1.38	\$0.21
1917.							
January .....	251,262	.80	.11	.20	1.20	2.15	.95
February .....	212,715	.91	.11	.21	1.23	2.17	.94
March .....	286,804	.87	.10	.18	1.15	2.06	.91
April .....	205,464	1.03	.16	.24	1.43	2.01	.58
May .....	249,298	1.06	.12	.29	1.40	2.42	1.02
June .....	296,945	.94	.14	.21	1.29	2.33	1.04
July .....	282,939	1.08	.15	.31	1.44	2.42	.98
August .....	264,276	1.11	.18	.22	1.51	2.46	.95
September .....	250,323	1.14	.23	.24	1.61	2.34	.73
October .....	265,133	1.16	.23	.23	1.62	2.35	.73
November .....	239,400	1.53	.26	.27	2.06	2.43	.37
December .....	181,982	1.60	.36	.35	2.31	2.55	.24

TABLE 35.—“Revised” costs and sales realizations of 6 operators mining about 2,750,000 tons annually in District No. 3 of Ohio, 1916-1918—Continued.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
1918.	Tons.						
January.....	196,030	\$1.53	\$0.21	\$0.26	\$2.00	\$2.54	\$0.54
February.....	192,000	1.52	.27	.27	2.06	2.53	.47
March.....	256,999	1.42	.23	.25	1.89	2.54	.65
April.....	224,542	1.46	.26	.26	1.99	2.54	.55
May.....	276,931	1.39	.22	.28	1.89	2.58	.69
June.....	250,261	1.46	.26	.26	1.98	2.51	.53
July.....	272,910	1.43	.22	.23	1.88	2.62	.74
August.....	254,729	1.47	.26	.25	1.98	2.61	.63
September.....	234,434	1.49	.26	.28	2.03	2.58	.55
October.....	256,570	1.49	.23	.25	1.97	2.59	.62
November.....	171,802	1.58	.32	.32	2.23	2.58	.35
December.....	142,474	1.67	.49	.43	2.59	2.50	1.09
Year 1916.....	2,502,375	.84	.11	.22	1.17	1.38	.21
January-March 1917.....	750,891	.89	.11	.19	1.19	2.12	.93
April-August 1917.....	1,238,827	1.04	.16	.22	1.41	2.34	.90
September-October 1917.....	515,461	1.16	.23	.24	1.62	2.34	.72
November 1917-March 1918.....	1,057,911	1.51	.26	.28	2.05	2.52	.47
April-May 1918.....	501,473	1.42	.25	.27	1.94	2.57	.63
June 1918.....	260,261	1.46	.26	.26	1.98	2.51	.53
July-August 1918.....	527,639	1.46	.24	.24	1.93	2.62	.69
September-December 1918.....	804,340	1.54	.30	.31	2.15	2.57	.42
Year 1916.....	2,502,375	.84	.11	.22	1.17	1.38	.21
Year 1917.....	2,977,561	1.09	.17	.23	1.49	2.31	.82
Year 1918.....	2,729,282	1.48	.26	.27	2.01	2.56	.55

<sup>1</sup> Amount by which sales realization is less than total f. o. b. mine cost.

The information appearing in the first two divisions of Table 35 is shown in graphic form in Chart 5 (opposite p. 74). Costs and sales realizations of the six operators were not obtained by months for 1916, but are combined figures for the calendar year. Their average labor cost for the year was 84 cents per ton; their total f. o. b. mine cost \$1.17 per ton; their sales realization \$1.38, and their margin 21 cents per ton.

From January, 1917, on, the Commission presents monthly figures. The first quarter of 1917 showed the effect of the increased demand for coal on the "spot" market, in a margin (93 cents per ton) much higher than the average for 1916. The drop in sales realization from \$2.17 per ton in February to \$2.06 in March is probably due to the shipping out of coal to complete delivery on relatively low-priced contracts. The average f. o. b. mine cost for January-March, 1917, was \$1.19 per ton, and the sales realization \$2.12. On March 31, 1917, most of the contracts made early in 1916 expired. The April sales realization of the six operators instead of rising, however, was \$2.01 per ton, 5 cents lower than in March. This is probably to be attributed principally to the shipping out of delayed tonnage due to complete the 1916 contracts and perhaps also partly to some slackening in demand, due to a hope on the part of the buyers in this market of a future fall in prices. In May, 1917, the sales realization rose to \$2.42 per ton. The average labor cost during April-August, 1917, was \$1.04

per ton, an increase of 15 cents over the average for January–March, 1917. This increase is attributable to the higher wage scale which went into effect April 1, 1917. The average monthly production was 250,297 tons for January–March, and 259,765 tons for April–August. The average f. o. b. mine cost for the six operators during April–August, 1917, was \$1.41 per ton, their sales realization \$2.34, and their margin 93 cents per ton.

On August 21, 1917, the Government first fixed prices under the Lever Act. The prices fixed by Executive order for the sale of coal not then under contract in this district on August 21, 1917, were as follows: "*Thin Vein*," run of mine, \$2.35; prepared sizes, \$2.60; slack, \$2.10. "*Thick Vein*," run of mine, \$2; prepared sizes, \$2.25; slack, \$1.75. The average proportions which these three classes of coal form of the total output, based on actual returns for all operators in this district who reported to the Federal Trade Commission during the period August–December, 1917, are as follows: run of mine, 42 per cent; prepared sizes, 43 per cent; slack, 15 per cent. Had the entire output of the six operators been sold at the prices established August 21, 1917, for *thin vein*, it would have brought them a sales realization of \$2.42 per ton. Had it been sold at the *thick vein* prices, it would have brought them a sales realization of \$2.07 per ton. The six operators in Table 35 *actually* received a sales realization of \$2.34 per ton during September and \$2.35 during October. This decrease from the August sales realization (\$2.46 per ton) is attributable chiefly to the effect of the governmental price regulation. The average f. o. b. mine cost of the six operators during September–October, 1917, was \$1.62 per ton (21 cents higher than that for April–August, 1917), their sales realization \$2.34 (the same as the preceding period), and their margin 72 cents, 21 cents lower. Of the increased cost, 11 cents was in labor cost and 8 cents in supplies. Their average monthly output was 257,730 tons, a slight decrease.

The distribution of the total f. o. b. mine costs for 45 operators who mined 2,252,929 tons in District No. 3 during the three months of August–October, 1917, is shown in the following table:

TABLE 36.—Total f. o. b. mine costs of 45 operators in District No. 3 of Ohio during August–October, 1917.

Total f. o. b. mine cost per ton by \$0.10 groupings.	Number of operators.	Accumulated per cent of output.	Total f. o. b. mine cost per ton by \$0.10 groupings.	Number of operators.	Accumulated per cent of output.
\$1.20 to \$1.29.....	2	5.2	\$1.90 to \$1.99.....	4	94.7
1.30 to 1.39.....	2	46.4	2.00 to 2.09.....	3	95.7
1.40 to 1.49.....	2	47.9	2.10 to 2.19.....	4	97.2
1.50 to 1.59.....	7	65.8	2.20 to 2.29.....	3	98.8
1.60 to 1.69.....	5	69.2	2.30 and over.....	2	100.0
1.70 to 1.79.....	5	84.2			
1.80 to 1.89.....	6	91.2	Total.....	45	100.0

The above table shows that had the operators sold their entire output at the prices fixed for *thick vein* by the President on August 21, 1917, about 84 per cent of the output would have shown a margin of 25 cents or over per ton. As will be seen from Table 18 (see p. 55), 96 per cent of the output from this district in 1918 came from seams which averaged 4 feet and over in thickness. The 45 operators *actually* received a sales realization, during August–October, 1917, of \$2.51 per ton, which left them an average margin of 96 cents per ton over their average f. o. b. mine cost of \$1.55 per ton.

Effective November 1, 1917, a 45-cent increase in the price of noncontracted coal was allowed by Executive order to take care of an increase in the wage scale which went into effect at that time. The labor cost for the period November, 1917–March, 1918, of the six operators shown in Table 35, increased 36 cents per ton (from \$1.15 per ton in September–October, 1917, to \$1.51 in November, 1917–March, 1918). A portion of this increase is attributable to the higher wage scale, and a part to the decrease in the average monthly production, which was 211,582 tons for November, 1917–March, 1918, as compared with 257,730 tons for September–October, 1917. The average total f. o. b. mine cost of the six operators for the period November, 1917–March, 1918, was \$2.05 per ton (an increase of 43 cents over September–October, 1917), the sales realization \$2.52 (an increase of 18 cents over the preceding period), and the margin 47 cents per ton, a decrease of 25 cents. On April 1, 1918, practically the entire output of the district came under governmental regulation, most of the contracts entered into before August 21, 1917, having expired. The average total f. o. b. mine cost for the six operators during April–May, 1918, was \$1.94 per ton (a decrease of 11 cents from the average of November, 1917–March, 1918). This decrease in cost is principally attributable to the increased production, the average monthly output in April–May having been 250,736 tons, as compared with 211,582 tons during November, 1917–March, 1918. The average sales realization during April–May, 1918, was \$2.57 per ton (an increase of 3 cents over the preceding period), and the margin 63 cents per ton, an increase of 16 cents. Effective May 25, 1918, the Fuel Administration made a reduction of 10 cents per ton in the existing maximum prices for the district. The sales realization during June, 1918 (following the May 25th price reduction), was \$2.51 per ton, a decrease of 7 cents from that in May. The total f. o. b. mine cost in June, 1918, was \$1.98 per ton (4 cents increase above the average for April–May), and the margin was 53 cents per ton, a decrease of 10 cents. The production in June (250,281 tons) was about the same as the average for April–May.

Effective June 29, 1918, new maximum prices for the district were established by the Fuel Administration. The new prices which applied to the entire output of the district, regardless of the thickness



of the seams from which derived, were (inclusive of the 45-cent price increase because of the November, 1917, wage increase) as follows: run of mine, \$2.55; prepared sizes, \$2.80; slack, \$2.30. Applying to these prices the proportions already stated, which the three classes of coal form of the total output, a sales realization of \$2.62 per ton was possible had the entire output been sold at such maximum prices. The sales realization *actually* received by the six operators during the period July–August, 1918, was \$2.62 per ton, an increase of 11 cents over that of June, 1918. The total f. o. b. mine cost during July–August, 1918, was \$1.93 per ton (a decrease of 5 cents from June), and the margin 69 cents per ton (an increase of 16 cents). The production increased, averaging 263,819 tons for July–August, as compared with 250,281 tons for June.

Effective August 23, 1918, the Fuel Administration made a reduction of 5 cents per ton in the existing maximum prices for this district. The average sales realization of the six operators during September–December, 1918, was \$2.57 per ton, a decrease of 5 cents from the preceding period. The total f. o. b. mine cost was \$2.15 per ton (an increase of 22 cents). The production also decreased. It was at its highest point during the month of October (255,570 tons), and fell to 171,862 tons in November, and 142,474 tons in December. For the four months' period, it averaged 201,085 tons. The decrease in production was principally due to the effect of the influenza epidemic and to slackening of demand for coal following the Armistice. As a result of the decrease in output, the total f. o. b. mine cost, which had been \$1.97 per ton in October, rose to \$2.23 per ton in November, and \$2.59 in December, and the margin, which was 62 cents per ton in October, dropped to 35 cents in November, while in December the f. o. b. mine cost exceeded the sales realization by 9 cents per ton. The average margin for the period September–December, 1918, was 42 cents per ton.

#### DISTRICT NO 3A.

The significance of the eight periods selected for presenting the figures for August, 1917–December, 1918, for District No. 3a has already been described in connection with District No. 1 (see pp. 68–69) and needs no repetition.

TABLE 37.—“Revised” costs and sales realizations of operators in District No. 3a of Ohio, producing about 70 per cent of the entire output, August, 1917–December, 1918.

	Number of operators.	Produc- tion tonnage.	Total f. o. b. mine cost.	Sales realiza- tion.	Margin.
August, 1917.....	7	14,685	\$1.80	\$3.12	\$1.32
September–October, 1917.....	7	28,674	1.89	2.63	.74
November–December, 1917.....	7	23,126	2.28	2.70	.42
January–March, 1918.....	10	64,765	2.14	2.49	.35
April–May, 1918.....	10	49,532	2.08	2.52	.44
June, 1918.....	10	24,340	2.15	2.55	.40
July–August, 1918.....	10	48,982	2.46	2.93	.47
September–December, 1918.....	10	88,190	2.54	2.68	.14

On August 21, 1917, the Government first fixed prices under the Lever Act. The prices fixed by Executive order for the sale of coal not then under contract in this district on August 21, 1917, were as follows: "*Thin Vein*," run of mine, \$2.35; prepared sizes, \$2.60; slack, \$2.10; "*Thick Vein*," run of mine, \$2; prepared sizes, \$2.25; slack, \$1.75. The average proportions which these three classes of coal form of the total output, based on actual returns for all operators in this district who reported to the Federal Trade Commission during the period August–December, 1917, are as follows: run of mine, 95 per cent; prepared sizes, 3 per cent; slack, 2 per cent. Had the entire output of the seven operators been sold at the prices established August 21, 1917, for *thin vein*, it would have brought them a sales realization of \$2.35 per ton. Had it been sold at the *thick vein* prices, it would have brought them a sales realization of \$2 per ton. As will be seen from Table 18 (see p. 55), 11 per cent of the output from this district in 1918 came from seams between 3 and 4 feet thick and 89 per cent came from seams 4 feet and more in thickness. The seven operators *actually* received during September–October, 1917, a sales realization of \$2.63 per ton. This was 49 cents less than they received during August, 1917, the decrease being attributable to the establishment of governmental maximum prices on August 21, 1917. The average total f. o. b. mine cost of the seven operators for September–October, 1917, was \$1.89 per ton, an increase of 9 cents over their cost for August. The average production decreased slightly, being 14,337 tons per month as compared with 14,685 tons for August. The margin during September–October was 74 cents per ton, a decrease of 58 cents from that for August (\$1.32 per ton). Effective November 1, 1917, a 45-cent increase in the established maximum prices was allowed by Executive order, to take care of an increase in the wage scale which went into effect at that time. The average f. o. b. mine cost of the seven operators for November–December, 1917 (\$2.28 per ton), increased 39 cents over that for September–October, 1917, a part of this increase being attributable to the higher wage scale and a part to the decrease in the output (to an average of 11,563 tons per month). The average sales realization for November–December, 1917, was \$2.70 per ton, an increase of 7 cents over that for September–October, and their margin 42 cents per ton, a decrease of 32 cents.

During the period January–March, 1918, the average total f. o. b. mine cost of the 10 operators who reported for the 12 months in 1918 was \$2.14 per ton, their sales realization, \$2.49, and their margin, 35 cents per ton. On March 31, 1918, most of the contracts entered into before August 21, 1917, expired. For the period April–May, 1918, the average f. o. b. mine cost of the 10 operators was \$2.08 per ton, their sales realization, \$2.52, and their margin 44 cents per

ton. Their average monthly production during April-May, 1918, was 24,766 tons, as compared with 21,588 tons during January-March. Effective May 25, 1918, the Fuel Administration made a reduction of 10 cents per ton in the existing maximum prices for this district. The *actual* sales realization for the 10 operators during June was \$2.55 per ton, an increase of 3 cents over that for April-May. Their total f. o. b. mine cost for June was \$2.15 per ton, an increase of 7 cents, and their margin was 40 cents per ton, a decrease of 4 cents. The June tonnage was 24,340 tons, a slight decrease. Effective June 29, 1918, the Fuel Administration established new maximum prices for this district. No distinction was made between the output from thin and thick veins. The new prices were (inclusive of the 45-cent price increase of November 1, 1917, because of the wage increase) as follows: run of mine, \$2.95; prepared sizes, \$3.20; slack, \$2.70. Applying the proportions of these classes of coal already stated for the district, the 10 operators would have received, had they sold their entire output at the new prices, a possible sales realization of \$2.95 per ton. They *actually* received during July and August, 1918, an average sales realization of \$2.93 per ton, an increase of 38 cents over their sales realization for June. The total f. o. b. mine cost for July-August was \$2.46 per ton, an increase of 31 cents. This is not due to a decrease in production, the average monthly output remaining about constant (24,491 tons as compared with 24,340 tons in June), but to exceptional conditions encountered by several of the 10 operators during the last half of 1918, which greatly increased their labor cost. The average margin for the 10 operators during July-August, 1918, was 47 cents. Effective August 23, 1918, the Fuel Administration made a reduction of 5 cents per ton in the then existing maximum prices for the district. The *actual* average sales realization of the 10 operators for September-December, 1918, was \$2.68 per ton, a decrease of 25 cents. A part of this decrease is attributable to the reduction of the official maximum prices, but most of it is due to an increase in the proportion of the output sold as slack coal. The average f. o. b. mine cost was \$2.54 per ton during September-December, 1918, an increase of 8 cents over the preceding period, while the average monthly production was 22,048 tons, a decrease of about 2,500 tons. The margin during September-December, 1918, was 14 cents per ton, a decrease of 33 cents from the preceding period.

#### DISTRICT NO. 4.

The significance of the nine periods selected for presenting the figures for 1916-1918 for District No. 4 has already been described in connection with other districts, as follows:

The first four periods (year 1916, January-March, 1917, April-August, 1917, and September-October, 1917) and the last four

periods (April-May, 1918, June, 1918, July-August, 1918, and September-December, 1918) have been described under District No. 2 (see pp. 70-71).

The period November, 1917-March, 1918, has been described under District No. 3 (see p. 78).

TABLE 38.—“Revised” costs and sales realizations of 3 operators mining about 550,000 tons annually in District No. 4 of Ohio, 1916-1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
Year 1916.....	Tons. 488,527	\$0.93	\$0.15	\$0.12	\$1.20	\$1.51	\$0.31
1917.							
January.....	47,946	.89	.16	.12	1.17	3.15	1.98
February.....	40,831	.90	.20	.14	1.24	3.02	1.78
March.....	61,542	.87	.10	.11	1.08	2.41	1.33
April.....	58,553	.96	.19	.12	1.27	2.21	.94
May.....	62,865	1.02	.25	.12	1.39	2.38	.99
June.....	61,519	1.05	.28	.12	1.45	2.50	1.05
July.....	58,872	1.07	.21	.13	1.41	2.36	.95
August.....	58,227	1.08	.22	.12	1.42	2.46	1.04
September.....	55,614	1.10	.26	.12	1.48	2.34	.86
October.....	61,143	1.12	.28	.12	1.52	2.34	.82
November.....	53,861	1.39	.32	.14	1.85	2.63	.78
December.....	44,026	1.45	.32	.16	1.93	2.69	.76
1918.							
January.....	38,403	1.55	.30	.24	2.09	2.67	.58
February.....	36,679	1.52	.30	.24	2.06	2.61	.55
March.....	56,782	1.40	.21	.19	1.80	2.53	.73
April.....	51,795	1.42	.25	.20	1.87	2.40	.53
May.....	52,108	1.48	.23	.22	1.93	2.71	.78
June.....	48,629	1.51	.25	.18	1.94	2.67	.73
July.....	53,352	1.43	.23	.20	1.86	2.98	1.12
August.....	59,202	1.47	.22	.19	1.88	3.00	1.12
September.....	40,582	1.52	.26	.21	1.99	2.94	.95
October.....	51,122	1.48	.26	.19	1.93	2.95	1.02
November.....	39,418	1.52	.38	.23	2.13	2.90	.77
December.....	41,569	1.57	.23	.23	2.03	2.75	.72
Year 1916.....	488,527	.93	.15	.12	1.20	1.51	.31
January-March, 1917.....	150,319	.88	.15	.12	1.15	2.81	1.66
April-August, 1917.....	300,336	1.04	.23	.12	1.39	2.38	.99
September-October, 1917.....	116,757	1.11	.27	.12	1.50	2.34	.84
November, 1917-March, 1918.....	229,751	1.45	.29	.19	1.93	2.62	.69
April-May, 1918.....	103,903	1.45	.24	.21	1.90	2.56	.66
June, 1918.....	48,629	1.51	.25	.18	1.94	2.67	.73
July-August, 1918.....	103,554	1.45	.23	.19	1.87	2.99	1.12
September-December, 1918.....	172,691	1.52	.28	.21	2.01	2.89	.88
Year 1916.....	488,527	.93	.15	.12	1.20	1.51	.31
Year 1917.....	665,299	1.07	.23	.13	1.43	2.51	1.08
Year 1918.....	560,641	1.48	.26	.21	1.95	2.76	.81

The information appearing in the first two divisions of Table 38 is shown in graphic form in Chart 6 (opposite p. 74). Costs and sales realizations for the three operators were not obtained by months for 1916, but are combined figures for the calendar year. Their average labor cost for the year was 93 cents per ton, their total f. o. b. mine cost \$1.20 per ton, their sales realization \$1.51, and their margin 31 cents per ton.

From January, 1917 on, the Commission presents monthly figures. The first quarter of 1917 showed the effect of the increased demand

for coal on the "spot" market in a margin (\$1.66 per ton) much higher than the average for 1916 (31 cents per ton). The drop in sales realization from \$3.02 per ton in February to \$2.41 in March is probably due to the shipping out of coal to complete delivery on relatively low priced contracts. The average f. o. b. mine cost for January-March, 1917, was \$1.15 per ton, and the sales realization \$2.81.

The average labor cost during April-August, 1917, was \$1.04 per ton, an increase of 16 cents over that for January-March, 1917 (88 cents per ton). This increase in cost is principally attributable to the higher wage scale, since the average monthly output during April-August was 60,067 tons, a considerable increase over the average for January-March (50,106 tons). On March 31, 1917, most of the contracts made early in 1916 expired. The sales realization of the six operators, instead of rising, however, was \$2.21 per ton in April, 20 cents lower than in March. This is probably to be attributed principally to the shipping out of delayed tonnage due to complete the 1916 contracts, and perhaps also partly to some slackening in demand due to a hope on the part of buyers in this market of a future fall in prices. In May, 1917, the sales realization rose to \$2.38 per ton, and in June reached \$2.50 per ton. It then dropped 14 cents to \$2.36 in July. This decrease is attributable in some measure to the public agitation over the high prices, one of the effects of which was the so-called "voluntary reduction" agreed upon at the operators' conference in Washington early in July. The average f. o. b. mine cost of the six operators during April-August, 1917, was \$1.39 per ton, their sales realization \$2.38, and their margin 99 cents per ton.

On August 21, 1917, the Government first fixed prices under the Lever Act. The prices fixed by Executive order for the sale of coal not then under contract in this district on August 21, 1917, were as follows: "*Thin Vein*," run of mine, \$2.35; prepared sizes, \$2.60; slack, \$2.10; "*Thick Vein*," run of mine, \$2; prepared sizes, \$2.25; slack, \$1.75. The average proportions which these classes of coal form of the total output, based on actual returns for all operators in this district who reported to the Federal Trade Commission during the period August-December, 1917, are as follows: run of mine, 68 per cent; prepared sizes, 22 per cent; slack, 10 per cent. Had the entire output of the three operators been sold at the prices established August 21, 1917, for *thin vein*, it would have brought them a sales realization of \$2.38 per ton. Had it been sold at the *thick vein* prices it would have brought them a sales realization of \$2.03 per ton. The three operators in Table 38 *actually* received a sales realization of \$2.34 per ton both during September and during October. This decrease of 12 cents from the August sales realization (\$2.46 per ton) is attributable chiefly to the effect of governmental price regulation. The average total f. o. b mine

cost of the three operators during September–October, 1917, was \$1.50 per ton (11 cents higher than that for April–August, 1917), their sales realization was \$2.34 (4 cents lower), and their margin 84 cents per ton (15 cents lower). Their average monthly output during September–October, 1917, was 58,378 tons, a decrease from the average of April–August (60,067 tons).

The distribution of the total f. o. b mine costs for 12 operators who mined 419,458 tons in District No. 4 during the three months of August–October, 1917, is shown in the following table:

TABLE 39.—Total f. o. b. mine costs of 12 operators in District No. 4 of Ohio during August–October, 1917.

Total f. o. b. mine costs per ton by \$0.10 groupings.	Number of operators.	Accumulated per cent of output.	Total f. o. b. mine costs per ton by \$0.10 groupings.	Number of operators.	Accumulated per cent of output.
\$1.20 to \$1.29.....	1	19.2	\$1.70 to \$1.79.....	2	85.2
\$1.30 to \$1.39.....	1	28.7	\$1.80 to \$1.89.....	2	100.0
\$1.40 to \$1.49.....	3	56.7	\$1.90 and over.....	2	
\$1.50 to \$1.59.....	2	77.2	Total.....	12	100.0
\$1.60 to \$1.69.....	2				

The above table shows that had the operators sold their entire output at the prices fixed for *thick vein* by the President on August 21, 1917, about 77 per cent of the output would have shown a margin of 25 cents or over per ton. Had they sold the entire output at the *thin vein* prices, about 85 per cent of the output would have shown a margin of 25 cents per ton. As will be seen from Table 18 (see p. 55), 46 per cent of the output from this district in 1918 came from seams between 3 and 4 feet thick, and 54 per cent came from seams 4 feet and over in thickness. The 12 operators *actually* received a sales realization during August–October, 1917, of \$2.36 per ton, which left them an average margin of 70 cents per ton over their average f. o. b. mine cost of \$1.66 per ton.

Effective November 1, 1917, a 45-cent increase in the price of noncontracted coal was allowed by Executive order to take care of an increase in the wage scale which went into effect at that time. The labor cost for the period November, 1917–March, 1918, of the three operators shown in Table 38 increased 34 cents per ton (from \$1.11 per ton in September–October, 1917, to \$1.45 per ton in November, 1917–March, 1918). A portion of this increase is attributable to the higher wage scale and a part to the decrease in the average monthly production, which was 45,950 tons for November, 1917–March, 1918, as compared with 58,378 tons for September–October, 1917. The average total f. o. b. mine cost of the three operators for the period November, 1917–March, 1918, was \$1.93 per ton (an increase of 43 cents over September–October, 1917), the sales realization \$2.62 (an increase of 28 cents), and the margin 69 cents per ton (a decrease of 15 cents). On April 1, 1918, practically the entire

output of the district came under governmental regulation, most of the contracts entered into before August 21, 1917, having expired. The average total f. o. b. mine cost for the three operators during April-May, 1917, was \$1.90 per ton (a decrease of 3 cents from the average of November, 1917-March, 1918). This decrease is principally attributable to an increase in production, the average monthly production for April-May being 51,951 tons, as compared with 45,950 tons during the preceding period. The average sales realization for April-May, 1918, was \$2.56 per ton (a decrease of 6 cents), and the margin 66 cents (a decrease of 3 cents). Effective May 25, 1918, the Fuel Administration made a reduction of 10 cents per ton in the existing maximum prices for the district. The total f. o. b. mine cost in June, 1918, was \$1.94 per ton (an increase of 4 cents over April-May, 1918), the sales realization \$2.67 (an increase of 11 cents), and the margin 73 cents per ton (an increase of 7 cents). The production in June was 48,629 tons, a decrease from the average for April-May (51,951 tons).

Effective June 29, 1918, new maximum prices for the district were established by the Fuel Administration. The new prices which applied to the entire output of the district, regardless of the thickness of the seams from which derived, were (inclusive of the 45-cent price increase because of the November, 1917, wage increase) as follows: run of mine, \$2.95; prepared sizes, \$3.20; slack, \$2.70. Applying to these prices the proportions (already stated) which these three classes of coal form of the total output, a sales realization of \$2.98 per ton was possible, had the entire output been sold at such maximum prices. The sales realizations *actually* received by the three operators during the period July-August, 1918, was \$2.99 per ton, an increase of 32 cents over that of June, 1918. This increase is attributable to the change in official maximum prices. The total f. o. b. mine cost during July-August, 1918, was \$1.87 per ton (a decrease of 7 cents from that in June), and the margin, \$1.12 per ton (an increase of 39 cents over that in June). The production averaged 51,777 tons per month during July-August, an increase over that in June (48,629 tons). Effective August 23, 1918, the Fuel Administration made a reduction of 5 cents per ton in the existing maximum prices for this district. The average sales realization of the three operators during September-December, 1918, was \$2.89 per ton, a decrease of 10 cents per ton from the preceding period. A part of this decrease is apparently due to the reduction of official maximum prices on August 23. There was a sharp drop in sales realization during December, 1918. This is apparently due to lower prices consequent on a decrease in demand. The average total f. o. b. mine cost for September-December, 1918, was \$2.01 per ton, an increase of 14 cents over the average for July-August. This increase is attributable to the falling off in production. In October the production was 51,122 tons; in

November, 39,418 tons; and in December, 41,569 tons. The decrease was principally due to the effect of the influenza epidemic, and to the slackening in the demand for coal, following the Armistice. The average monthly production for the four-month period was 43,172 tons. The average margin for September–December, 1918, was 88 cents per ton.

#### DISTRICTS NOS. 5 AND 9 (COMBINED).

The significance of the nine periods selected for presenting the figures for 1916–1918 for Districts Nos. 5 and 9 (combined) has already been described in connection with other districts as follows:

The first four periods (year, 1916, January–March, 1917, April–August, 1917, and September–October, 1917) and the last four periods (April–May, 1918, June, 1918, July–August, 1918, and September–December, 1918) have been described under District No. 2 (see pp. 70–71).

The period November, 1917–March, 1918, has been described under District No. 3 (see p. 78).

TABLE 40.—“Revised” costs and sales realizations of 5 operators mining about 4,750,000 tons annually in Districts Nos. 5 and 9 (combined) of Ohio, 1916–1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
Year, 1916.....	<i>Tons.</i> 4,968,566	\$0.80	\$0.08	\$0.12	\$1.00	\$1.21	\$0.21
1917.							
January.....	394,295	.83	.09	.13	1.05	1.97	.92
February.....	302,140	.89	.13	.14	1.16	2.00	.84
March.....	364,269	.87	.10	.12	1.09	1.77	.68
April.....	324,792	.98	.13	.15	1.26	2.41	1.15
May.....	433,731	1.01	.11	.12	1.24	2.65	1.41
June.....	405,757	1.03	.13	.16	1.32	2.72	1.40
July.....	397,110	1.02	.13	.14	1.29	2.66	1.37
August.....	412,008	1.01	.17	.23	1.40	2.69	1.29
September.....	371,782	1.00	.19	.22	1.42	2.68	1.26
October.....	428,889	1.04	.17	.21	1.42	2.64	1.22
November.....	367,236	1.31	.21	.26	1.78	2.77	.99
December.....	313,971	1.34	.24	.26	1.83	2.71	.88
1918.							
January.....	324,453	1.41	.18	.20	1.79	2.68	.89
February.....	326,805	1.32	.16	.20	1.68	2.67	.99
March.....	364,351	1.33	.20	.18	1.71	2.64	.93
April.....	422,785	1.27	.14	.18	1.59	2.47	.88
May.....	404,757	1.31	.20	.19	1.70	2.45	.75
June.....	404,594	1.35	.21	.19	1.75	2.44	.69
July.....	517,393	1.28	.20	.18	1.66	2.69	1.03
August.....	448,048	1.36	.20	.18	1.74	2.69	.96
September.....	422,653	1.33	.24	.19	1.76	2.58	.82
October.....	430,993	1.35	.21	.20	1.76	2.57	.81
November.....	330,339	1.40	.26	.21	1.87	2.64	.77
December.....	356,380	1.42	.27	.20	1.89	2.53	.64
Year, 1916.....	4,968,566	.80	.08	.12	1.00	1.21	.21
January–March, 1917.....	1,080,704	.86	.10	.13	1.09	1.91	.82
April–August, 1917.....	1,973,398	1.01	.13	.16	1.30	2.63	1.33
September–October, 1917.....	800,651	1.02	.18	.22	1.42	2.66	1.24
November, 1917–March, 1918.....	1,696,816	1.34	.20	.22	1.76	2.70	.94
April–May, 1918.....	827,542	1.29	.17	.18	1.64	2.46	.82
June, 1918.....	404,594	1.35	.20	.20	1.75	2.44	.69
July–August, 1918.....	965,431	1.31	.20	.18	1.69	2.69	1.00
September–December, 1918.....	1,540,365	1.37	.24	.20	1.81	2.58	.77
Year, 1916.....	4,968,566	.80	.08	.12	1.00	1.21	.21
Year, 1917.....	4,515,960	1.02	.15	.18	1.35	2.43	1.13
Year, 1918.....	4,753,541	1.34	.20	.19	1.73	2.69	.86



Of the five operators whose costs appear in Table 40, four (who produced 4,641,394 tons in 1918) were located in District No. 9, and one (who produced 112,147 tons in 1918) was located in District No. 5. In order that the figures for District No. 5 should not be identified with the one operator who furnished them, they have been combined with those of the four operators in District No. 9. With the exception of the period from August 23, 1918–December 31, 1918, the established maximum prices for both Districts No. 5 and No. 9 have been identical. The costs shown in Table 40, are more nearly typical for District No. 9 than for District No. 5.

The information appearing in the first two divisions of Table 40, is shown in graphic form in Chart 7 (opposite p. 74). Costs and sales realizations for the five operators were not obtained by months for 1916, but are combined figures for the calendar year. Their average labor cost for the year was 80 cents per ton, their total f. o. b. mine cost \$1 per ton, their sales realization \$1.21, and their margin 21 cents per ton.

From January, 1917, on, the Commission presents monthly figures. The first quarter of 1917 showed the effect of the increased demand for coal on the "spot" market in a margin (82 cents per ton) much higher than the average for 1916 (21 cents per ton). The drop in sales realization from \$2 per ton in February to \$1.77 in March is probably due to the shipping out of coal to complete delivery on relatively low-priced contracts. The average f. o. b. mine cost for January–March, 1917, was \$1.09 per ton, and the sales realization \$1.91.

The average labor cost during April–August, 1917, was \$1.01 per ton, an increase of 15 cents over that for January–March, 1917 (86 cents per ton). This increase in cost is principally attributable to the higher wage scale, since the average monthly output during April–August was 394,679 tons, a considerable increase over the average for January–March (353,568 tons). On March 31, 1917, most of the contracts made early in 1916 expired. The sales realization rose during April and May, and in June reached \$2.72 per ton. It then dropped 6 cents to \$2.66 in July. This decrease is attributable in some measure to the public agitation over the high prices, one of the effects of which was the so-called "voluntary reduction" agreed upon at the operators' conference in Washington early in July. The average f. o. b. mine cost of the five operators during April–August, 1917, was \$1.30 per ton, their sales realization, \$2.63, and their margin, \$1.33 per ton.

On August 21, 1917, the Government first fixed prices under the Lever Act. The prices fixed by Executive order for the sale of coal not then under contract in these districts on August 21, 1917, were as fol-

lows: "*Thin Vein*," run of mine, \$2.35; prepared sizes, \$2.60; slack, \$2.10; "*Thick Vein*," run of mine, \$2; prepared sizes, \$2.25; slack, \$1.75. The average proportions which these three classes of coal form of the total output, based on actual returns for all operators in these districts who reported to the Federal Trade Commission during the period August–December, 1917, are as follows: run of mine, 34 per cent; prepared sizes, 50 per cent; slack, 16 per cent. Had the entire output of the five operators been sold at the prices established August 21, 1917, for *thin vein*, it would have brought them a sales realization of \$2.44 per ton. Had it been sold at the *thick vein* prices, it would have brought them a sales realization of \$2.09 per ton. The five operators in Table 40 *actually* received a sales realization of \$2.68 per ton during September and \$2.64 during October. The average total f. o. b. mine cost of the five operators during September–October, 1917, was \$1.42 per ton (12 cents higher than that for April–August, 1917), their sales realization was \$2.66 (3 cents higher), and their margin \$1.24 per ton (9 cents lower). Their average monthly output during September–October, 1917, was 400,325 tons, an increase from the average of April–August (394,679 tons).

The distribution of the total f. o. b. mine costs for 11 operators who mined 1,265,158 tons in Districts Nos. 5 and 9 (combined) during the three months of August–October, 1917, is shown in the following table:

TABLE 41.—Total f. o. b. mine costs of 11 operators in Districts Nos. 5 and 9 (combined) of Ohio during August–October, 1917.

Total f. o. b. mine cost per ton by \$.10 groupings.	Number of operators.	Accumulated per cent of output.	Total f. o. b. mine cost per ton by \$.10 groupings.	Number of operators.	Accumulated per cent of output.
\$1.20 to \$1.29.....	1	7.3	\$1.80 to \$1.89.....	2	98.9
1.30 to 1.39.....	2	83.7	1.90 to 1.99.....	2	100.0
1.40 to 1.49.....	1	86.5	2.00 and over.....		
1.50 to 1.59.....	3	97.7	Total.....	11	100.0
1.60 to 1.69.....					
1.70 to 1.79.....					

The above table shows that had the operators sold their entire output at the prices fixed for *thick vein* by the President on August 21, 1917, about 98 per cent of the output would have shown a margin of 25 cents or over per ton. Had they sold the entire output at the *thin vein* prices, about all of the output would have shown a margin of 25 cents per ton. As will be seen from Table 18 (see p. 56), 73 per cent of the output from District No. 5 in 1918 came from seams between 3 and 4 feet thick, and 27 per cent from seams 4 feet and over in thickness, while in District No. 9, 1 per cent of the output in

1918 came from seams under 4 feet thick and 99 per cent from seams 4 feet and over in thickness. The eleven operators *actually* received a sales realization during August–October, 1917, of \$2.72 per ton, which left them an average margin of \$1.31 per ton over their average f. o. b. mine cost of \$1.41 per ton.

Effective November 1, 1917, a 45-cent increase in the price of noncontracted coal was allowed by Executive order to take care of an increase in the wage scale which went into effect at that time. The labor cost for the period November, 1917–March, 1918, of the five operators shown in Table 40 increased 32 cents per ton (from \$1.02 per ton in September–October, 1917, to \$1.34 per ton in November, 1917–March, 1918). A portion of this increase is attributable to the higher wage scale, and a part to the decrease in the average monthly production, which was 339,363 tons for November, 1917–March, 1918, as compared with 400,325 tons for September–October, 1917. The average total f. o. b. mine cost of the five operators for the period November, 1917–March, 1918, was \$1.76 per ton (an increase of 34 cents over September–October, 1917), the sales realization, \$2.70 (an increase of 4 cents), and the margin 94 cents per ton (a decrease of 30 cents). On April 1, 1918, practically the entire output of the two districts came under governmental regulation, most of the contracts entered into before August 21, 1917, having expired. The average total f. o. b. mine cost for the five operators during April–May, 1918, was \$1.64 per ton (a decrease of 12 cents from the average of November, 1917–March, 1918). This decrease is principally attributable to an increase in production, the average monthly production for April–May being 413,771 tons as compared with 339,363 tons during the preceding period. The average sales realization for April–May, 1918, was \$2.46 per ton (a decrease of 24 cents), and the margin 82 cents (a decrease of 12 cents). Effective May 25, 1918, the Fuel Administration made a reduction of 10 cents per ton in the existing maximum prices for the two districts. The total f. o. b. mine cost in June, 1918, was \$1.75 per ton (an increase of 11 cents over April–May, 1918), the sales realization \$2.44 (a decrease of 2 cents), and the margin 69 cents per ton (a decrease of 13 cents). The production in June was 404,594 tons, a decrease from the average for April–May (413,771 tons).

Effective June 29, 1918, new maximum prices for these districts were established by the Fuel Administration. The new prices which applied to the entire output of the two districts, regardless of the thickness of the seams from which derived, were (inclusive of the 45-cent price increase because of the November, 1917, wage increase) as follows: run of mine, \$2.70; prepared sizes, \$2.95; slack

\$2.45. Applying to these prices the proportions (already stated), which these three classes of coal form of the total output, a sales realization of \$2.79 per ton was possible, had the entire output been sold at such maximum prices. The sales realizations *actually* received by the five operators during the period July–August, 1918, was \$2.69 per ton, an increase of 25 cents over that of June, 1918. This increase is attributable to the change in official maximum prices. The total f. o. b. mine cost during July–August, 1918, was \$1.69 per ton (a decrease of 6 cents from that in June) and the margin, \$1 per ton (an increase of 31 cents over that in June). The production averaged 482,715 tons per month during July–August, a marked increase over that in June (404,594 tons). Effective August 23, 1918, the Fuel Administration made a reduction of 5 cents per ton in the existing maximum prices for District No. 5 and 20 cents per ton in the existing maximum prices for District No. 9. The average sales realization of the five operators during September–December, 1918, was \$2.58 per ton, a decrease of 11 cents per ton from the preceding period. This decrease is apparently partly due to the reduction of official maximum prices on August 23. The average total f. o. b. mine cost for September–December, 1918, was \$1.81 per ton, an increase of 12 cents over the average for July–August. This increase is attributable to the falling off in production. In October the production was 430,993 tons; in November, 330,339 tons; and in December, 356,380 tons. The decrease was principally due to the effect of the influenza epidemic, and to the slackening in the demand for coal, following the Armistice. The average monthly production for the four-month period was 385,091 tons. The average margin for September–December, 1918, was 77 cents per ton.

#### DISTRICT NO. 6.

The significance of the nine periods selected for presenting the figures for 1916–1918 for District No. 6 has already been described in connection with other districts as follows:

The first four periods (year, 1916, January–March, 1917, April–August, 1917, and September–October, 1917) and the last four periods (April–May, 1918, June, 1918, July–August, 1918, and September–December, 1918) have been described under District No. 2 (see pp. 70–71).

The period November, 1917–March, 1918, has been described under District No. 3 (see p. 78).

TABLE 42.—“Revised” costs and sales realizations of 12 operators mining about 1,750,000 tons annually in District No. 6 of Ohio, 1916–1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
1916.	<i>Tons.</i>						
Year.....	1,693,822	\$0.93	\$0.11	\$0.17	\$1.21	\$1.51	\$0.30
1917.							
January.....	152,027	.99	.15	.17	1.31	2.39	1.08
February.....	139,326	1.00	.16	.18	1.34	2.75	1.41
March.....	157,132	.99	.16	.18	1.33	2.30	.97
April.....	152,320	1.07	.20	.17	1.44	2.64	1.20
May.....	152,029	1.17	.20	.17	1.54	3.15	1.61
June.....	140,368	1.19	.25	.18	1.62	3.28	1.66
July.....	135,238	1.23	.29	.20	1.72	3.03	1.31
August.....	157,922	1.16	.25	.25	1.66	3.01	1.35
September.....	132,111	1.22	.34	.32	1.88	2.94	1.06
October.....	139,543	1.24	.43	.26	1.93	2.92	.99
November.....	139,437	1.58	.43	.26	2.27	3.17	.90
December.....	142,557	1.54	.41	.29	2.24	3.12	.88
1918.							
January.....	143,810	1.58	.27	.25	2.10	2.94	.84
February.....	137,185	1.58	.34	.26	2.18	2.94	.76
March.....	171,962	1.49	.26	.24	1.99	2.89	.90
April.....	162,387	1.50	.28	.24	2.02	2.78	.76
May.....	162,877	1.53	.32	.24	2.09	2.77	.68
June.....	168,560	1.52	.34	.23	2.09	2.71	.62
July.....	185,101	1.50	.36	.22	2.08	3.00	.92
August.....	183,652	1.52	.37	.23	2.12	3.00	.88
September.....	170,007	1.51	.41	.24	2.16	2.96	.80
October.....	167,442	1.55	.36	.25	2.16	2.96	.80
November.....	112,872	1.73	.49	.30	2.52	2.95	.43
December.....	89,929	1.90	.64	.42	2.96	2.86	1.10
Year 1916.....	1,693,822	.93	.11	.17	1.21	1.51	.30
January–March, 1917.....	448,485	.99	.15	.18	1.32	2.47	1.15
April–August, 1917.....	737,907	1.16	.23	.20	1.59	3.02	1.43
September–October, 1917.....	271,654	1.23	.38	.29	1.90	2.93	1.03
November, 1917–March, 1918.....	740,951	1.55	.34	.26	2.15	3.01	.86
April–May, 1918.....	325,264	1.52	.30	.24	2.06	2.77	.71
June, 1918.....	168,560	1.52	.34	.23	2.09	2.71	.62
July–August, 1918.....	368,753	1.51	.36	.23	2.10	3.00	.90
September–December, 1918.....	540,250	1.63	.45	.29	2.37	2.94	.57
Year 1916.....	1,693,822	.93	.11	.17	1.21	1.51	.30
Year 1917.....	1,740,040	1.19	.27	.22	1.68	2.88	1.20
Year 1918.....	1,861,784	1.56	.36	.25	2.17	2.90	.73

<sup>1</sup> Amount by which the sales realization is less than total f. o. b. mine cost.

The information appearing in the first two divisions of Table 42 is shown in graphic form in Chart 8 (opposite p. 74). Costs and sales realizations for the 12 operators were not obtained by months for 1916, but are combined figures for the calendar year. Their average labor cost for the year was 93 cents per ton, their total f. o. b. mine cost \$1.21 per ton, their sales realization \$1.51, and their margin 30 cents per ton.

From January, 1917 on, the Commission presents monthly figures. The first quarter of 1917 showed the effect of the increased demand for coal on the “spot” market in a margin (\$1.15 per ton) much higher than the average for 1916 (30 cents per ton). The drop in sales realization from \$2.75 per ton in February to \$2.30 in March is probably due to the shipping out of

coal to complete delivery on relatively low-priced contracts. The average f. o. b. mine cost for January–March, 1917, was \$1.32 per ton and the sales realization \$2.47.

The average labor cost during April–August, 1917, was \$1.16 per ton, an increase of 17 cents over that for January–March, 1917 (99 cents per ton). This increase in cost is principally attributable to the higher wage scale, and in part to a decrease in production, since the average monthly output during April–August was 147,581 tons, a slight decrease over the average for January–March (149,495 tons). On March 31, 1917, most of the contracts made early in 1916 expired. During April and May the sales realization rose and in June reached \$3.28 per ton. It then dropped 25 cents to \$3.03 in July. This decrease is attributable in some measure to the public agitation over the high prices, one of the effects of which was the so-called “voluntary reduction” agreed upon at the operators’ conference in Washington early in July. The average f. o. b. mine cost of the 12 operators during April–August, 1917, was \$1.59 per ton, their sales realization was \$3.02, and their margin was \$1.43 per ton.

On August 21, 1917, the Government first fixed prices under the Lever Act. The prices fixed by Executive order for the sale of coal not then under contract in this district on August 21, 1917, were as follows: “*Thin Vein*,” run of mine, \$2.35; prepared sizes, \$2.60; slack, \$2.10; “*Thick Vein*,” run of mine, \$2; prepared sizes, \$2.25; slack, \$1.75. The average proportions which these three classes of coal form of the total output, based on actual returns for all operators in this district who reported to the Federal Trade Commission during the period August–December, 1917, are as follows: run of mine, 46 per cent; prepared sizes, 38 per cent; slack, 16 per cent. Had the entire output of the 12 operators been sold at the prices established August 21, 1917, for *thin vein*, it would have brought them a sales realization of \$2.41 per ton. Had it been sold at the *thick vein* prices, it would have brought them a sales realization of \$2.06 per ton. The 12 operators in Table 42 *actually* received a sales realization of \$2.94 per ton during September and \$2.92 during October. The average total f. o. b. mine cost of the 12 operators during September–October, 1917, was \$1.90 per ton (31 cents higher than that for April–August, 1917), their sales realization was \$2.93 (9 cents lower), and their margin \$1.03 per ton (40 cents lower). Their average monthly output during September–October, 1917, was 135,827 tons, a decrease from the average of April–August (147,581 tons).

The distribution of the total f. o. b. mine costs for 42 operators who mined 693,787 tons in District No. 6 during the three months of August–October, 1917, is shown in the following table:

TABLE 43.—*Total f. o. b. mine costs of 42 operators in District No. 6 of Ohio during August–October, 1917.*

Total f. o. b. mine cost per ton by \$0.10 groupings.	Number of operators.	Accumulated per cent. of output.	Total f. o. b. mine cost per ton by \$0.10 groupings.	Number of operators.	Accumulated per cent. of output.
\$1.40 to \$1.49.....	2	25.0	\$2.40 to \$2.49.....	2	87.5
\$1.50 to \$1.59.....	2	33.1	\$2.50 to \$2.59.....	5	93.1
\$1.60 to \$1.69.....	2	35.5	\$2.60 to \$2.69.....	1	93.8
\$1.70 to \$1.79.....	5	44.3	\$2.70 to \$2.79.....	1	94.3
\$1.80 to \$1.89.....	4	53.7	\$2.80 to \$2.89.....	1	94.9
\$1.90 to \$1.99.....	3	64.9	\$2.90 to \$2.99.....	1	95.2
\$2.00 to \$2.09.....	3	73.1	\$3.00 and over.....	3	100.0
\$2.10 to \$2.19.....	3	80.3			
\$2.20 to \$2.29.....	2	81.9	Total.....	42	100.0
\$2.30 to \$2.39.....	2	83.3			

The above table shows that had the operators sold their entire output at the prices fixed for *thick vein* by the President on August 21, 1917, about 44 per cent of the output would have shown a margin of 25 cents or over per ton. Had they sold the entire output at the *thin vein* prices, about 73 per cent of the output would have shown a margin of 25 cents per ton. As will be seen from Table 18 (see p. 56), 41 per cent of the output from this district in 1918 came from seams under 4 feet thick, and 59 per cent came from seams 4 feet and over in thickness. The 42 operators *actually* received a sales realization during August–October, 1917, of \$2.93 per ton, which left them an average margin of \$1 per ton over their average f. o. b. mine cost of \$1.93 per ton.

Effective November 1, 1917, a 45-cent increase in the price of noncontracted coal was allowed by Executive order to take care of an increase in the wage scale which went into effect at that time. The labor cost for the period November, 1917–March, 1918, of the 12 operators shown in Table 42, increased 32 cents per ton (from \$1.23 per ton in September–October, 1917, to \$1.55 per ton in November, 1917–March, 1918). This increase is attributable to the higher wage scale, since there was a marked increase in the average monthly production which was 148,190 tons for November, 1917–March, 1918, as compared with 135,827 tons for September–October, 1917. The average total f. o. b. mine cost of the 12 operators for the period November, 1917–March, 1918, was \$2.15 per ton (an increase of 25 cents over September–October, 1917), the sales realization, \$3.01 (an increase of 8 cents), and the margin 86 cents per ton (a decrease of 17 cents). On March 21, 1918, the Fuel Administration abolished the price distinction between "*thick vein*" and "*thin vein*" coal by reaffirming for the entire output of this district the prices hitherto established for "*thick vein*" coal. On April 1, 1918, practically the entire output of the district came under governmental regulation, most of the contracts entered into before August 21, 1917, having expired. The average total f. o. b. mine cost for the 12 operators

during April-May, 1918, was \$2.06 per ton (a decrease of 9 cents from the average of November, 1917-March, 1918). This decrease is principally attributable to an increase in production, the average monthly production for April-May being 162,632 tons as compared with 148,190 tons during the preceding period. The average sales realization for April-May, 1918, was \$2.77 per ton (a decrease of 24 cents). Part of this decrease is probably attributable to the extension by the order of March 21, of the "*thick vein*" prices over the total output of the district. The margin was 71 cents (a decrease of 15 cents). Effective May 25, 1918, the Fuel Administration made a reduction of 10 cents per ton in the existing maximum prices for the district. The total f. o. b. mine cost in June, 1918, was \$2.09 per ton (an increase of 3 cents over April-May, 1918), the sales realization, \$2.71 (a decrease of 6 cents), and the margin 62 cents per ton (a decrease of 9 cents). The production in June was 168,560 tons, a slight increase over that for April-May (162,632 tons).

Effective June 29, 1918, new maximum prices for the district were established by the Fuel Administration. The new prices were (inclusive of the 45-cent price increase because of the November, 1917, wage increase) as follows: run of mine, \$2.95; prepared sizes, \$3.20; slack, \$2.70. Applying to these prices the proportions (already stated) which these three classes of coal form of the total output, a sales realization of \$3.01 per ton was possible, had the entire output been sold at such maximum prices. The sales realization *actually* received by the 12 operators during the period July-August, 1918, was \$3 per ton, an increase of 29 cents over that of June, 1918. This increase is attributable to the change in official maximum prices. The total f. o. b. mine cost during July-August, 1918, was \$2.10 per ton (an increase of 1 cent over that in June) and the margin, 90 cents per ton (an increase of 28 cents over that in June). The production averaged 184,377 tons per month, during July-August, an increase over that in June (168,560 tons). Effective August 23, 1918, the Fuel Administration made a reduction of 5 cents per ton in the existing maximum prices for this district. The average sales realization of the 12 operators during September-December, 1918, was \$2.94 per ton, a decrease of 6 cents per ton from the preceding period. The average total f. o. b. mine cost for September-December, 1918, was \$2.37 per ton, an increase of 27 cents over the average for July-August. This increase is attributable to the falling off in production. In October the production was 167,442 tons; in November, 112,872 tons; and in December, 89,929 tons. The decrease was principally due to the effect of the influenza epidemic, and to the slackening in the demand for coal, following the Armistice. The average monthly production for the four-month period was 135,063 tons. Due to the increase in total f. o. b. mine costs because of the decrease in pro-



duction, the margin, which was 80 cents per ton, in October, fell to 43 cents in November, while in December, the total f. o. b. mine cost exceeded the sales realization by 10 cents per ton. The average margin for September–December, 1918, was 57 cents per ton.

#### DISTRICT NO. 7.

The significance of the 10 periods selected for presenting the figures for 1916–1918 for District No. 7 is as follows:

The descriptions of the first four periods (year 1916, January–March, 1917, April–August, 1917, and September–October, 1917), and of the last four periods (April–May, 1918, June, 1918, July–August, 1918, and September–December, 1918), have already been given in connection with District No. 2 (see pp. 70–71) and need no repetition.

*November, 1917–January, 1918.*—This period directly followed the increase in the maximum prices, allowed by Executive order to the entire district, in consequence of the adoption of a new wage scale (1917–18) which was higher than that adopted earlier in 1917. Effective November 6, 1917, an increase in maximum prices was allowed by the Fuel Administration for the output of mines located in the Deerfield or Palmyra and Massillon Fields, a part of the area included in District No. 7.

*February–March, 1918.*—This period followed the decrease in maximum prices, effective January 23, 1918, made by the Fuel Administration for the output of mines located in the Deerfield or Palmyra and Massillon Fields.

TABLE 41.—“Revised” costs and sales realizations of 3 operators mining about 375,000 tons annually in District No. 7 of Ohio, 1916–1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
Year 1916.....	Tons, 350,230	\$1.12	\$0.09	\$0.23	\$1.44	\$1.78	\$0.34
1917.							
January.....	35,556	1.17	.11	.21	1.79	2.75	1.28
February.....	28,100	1.18	.13	.27	1.58	2.82	1.24
March.....	29,404	1.24	.17	.25	1.66	2.71	1.05
April.....	27,671	1.29	.14	.24	1.67	2.87	1.20
May.....	32,223	1.31	.10	.23	1.64	3.13	1.54
June.....	31,062	1.30	.18	.25	1.73	3.44	1.77
July.....	31,384	1.35	.14	.31	1.80	3.19	1.39
August.....	31,577	1.32	.20	.39	1.91	3.16	1.25
September.....	24,407	1.36	.22	.45	2.03	2.99	.96
October.....	36,127	1.37	.29	.52	2.18	2.90	.72
November.....	36,103	1.68	.29	.47	2.44	3.32	.88
December.....	27,271	1.74	.32	.65	2.71	3.39	.68

TABLE 44.—“Revised” costs and sales realizations of 3 operators mining about \$75,600 tons annually in District No. 7 of Ohio, 1916–1918—Continued.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
1918.	Tons.						
January.....	34,918	\$1.77	\$0.28	\$0.41	\$2.46	\$3.29	\$0.83
February.....	34,335	1.08	.37	.35	2.40	3.26	.86
March.....	33,835	1.64	.37	.36	2.37	3.18	.81
April.....	30,429	1.09	.22	.36	2.27	2.99	.72
May.....	34,299	1.61	.25	.28	2.14	3.03	.89
June.....	27,435	1.68	.22	.39	2.29	3.04	.75
July.....	38,530	1.58	.14	.34	2.06	3.48	1.42
August.....	42,197	1.58	.16	.39	2.13	3.45	1.32
September.....	37,111	1.66	.13	.39	2.18	3.45	1.27
October.....	26,293	1.78	.25	.42	2.45	3.41	.96
November.....	27,699	1.91	.23	.42	2.56	3.43	.87
December.....	27,758	1.98	.21	.48	2.67	3.37	.70
Year 1918.....	359,239	1.12	.09	.23	1.44	1.78	.34
January–March, 1917.....	91,060	1.19	.14	.24	1.57	2.76	1.19
April–August, 1917.....	159,917	1.31	.16	.29	1.76	3.18	1.42
September–October, 1917.....	65,531	1.37	.26	.48	2.11	2.94	.83
November, 1917–January, 1918.....	98,292	1.73	.30	.49	2.52	3.33	.91
February–March, 1918.....	68,170	1.66	.37	.36	2.39	3.22	.83
April–May, 1918.....	64,723	1.65	.24	.32	2.21	3.01	.90
June, 1918.....	27,435	1.68	.22	.39	2.29	3.04	.75
July–August, 1918.....	80,727	1.58	.15	.37	2.10	3.46	1.36
September–December, 1918.....	123,861	1.82	.20	.42	2.44	3.42	.98
Year 1916.....	359,239	1.12	.09	.23	1.44	1.78	.34
Year 1917.....	382,885	1.36	.19	.35	1.90	3.07	1.17
Year 1918.....	404,839	1.70	.24	.38	2.32	3.29	.97

The information appearing in the first two divisions of Table 44 is shown in graphic form in Chart 9 (opposite p. 74). Costs and sales realizations for the three operators were not obtained by months for 1916, but are combined figures for the calendar year. Their average labor cost for the year was \$1.12 per ton, their total f. o. b. mine cost, \$1.44 per ton, their sales realization, \$1.78, and their margin 34 cents per ton.

From January, 1917 on, the Commission presents monthly figures. The first quarter of 1917 showed the effect of the increased demand for coal on the “spot” market in a margin (\$1.19 per ton) much higher than the average for 1916 (34 cents per ton). The drop in sales realization from \$2.82 per ton in February to \$2.71 in March is probably due to the shipping out of coal to complete delivery on relatively low-priced contracts. The average f. o. b. mine cost for January–March, 1917, was \$1.57 per ton, and the sales realization \$2.76.

The average labor cost during April–August, 1917, was \$1.31 per ton, an increase of 12 cents over that for January–March, 1917 (\$1.19 per ton). This increase in cost is principally attributable to the higher wage scale, since the average monthly output during April–August was 31,983 tons, a slight increase over the average for January–March (31,353 tons). On March 31, 1917, most of the contracts made early in 1916 expired. The sales realization rose during April and

May, and in June reached \$3.44 per ton. It then dropped 25 cents to \$3.19 in July. This decrease is attributable in some measure to the public agitation over the high prices, one of the effects of which was the so-called "voluntary reduction" agreed upon at the operators' conference in Washington early in July. The average f. o. b. mine cost of the three operators during April–August, 1917, was \$1.76 per ton, their sales realization, \$3.18, and their margin, \$1.42 per ton.

On August 21, 1917, the Government first fixed prices under the Lever Act. The prices fixed by Executive order for the sale of coal not then under contract in this district on August 21, 1917, were as follows: "*Thin Vein*," run of mine, \$2.35; prepared sizes, \$2.60; slack, \$2.10; "*Thick Vein*," run of mine, \$2; prepared sizes, \$2.25; slack, \$1.75. The average proportions which these three classes of coal form of the total output, based on actual returns for all operators in the district who reported to the Federal Trade Commission during the period August–December, 1917, are as follows: run of mine, 51 per cent; prepared sizes, 33 per cent; slack, 16 per cent. Had the entire output of the three operators been sold at the prices established August 21, 1917, for *thin vein*, it would have brought them a sales realization of \$2.39 per ton. Had it been sold at the *thick-vein* prices, it would have brought them a sales realization of \$2.04 per ton. The three operators in Table 44 *actually* received a sales realization of \$2.99 per ton during September and \$2.90 during October. The average total f. o. b. mine cost of the three operators during September–October, 1917, was \$2.11 per ton (35 cents higher than that for April–August, 1917, the increase being principally in the items of supplies and general expense cost), their sales realization was \$2.94 (24 cents lower), and their margin 83 cents per ton (59 cents lower). Their average monthly output during September–October, 1917, was 32,767 tons, an increase over the average of April–August (31,983 tons).

The distribution of the total f. o. b. mine costs for 14 operators who mined 186,478 tons in District No. 7 during the three months of August–October, 1917, is shown in the following table:

TABLE 45.—Total f. o. b. mine costs of 14 operators in District No. 7 of Ohio during August–October, 1917.

Total f. o. b. mine cost per ton, by \$0.10 groupings.	Number of operators.	Accumulated per cent of output.	Total f. o. b. mine cost per ton, by \$0.10 groupings.	Number of operators.	Accumulated per cent of output.
\$1.70 to \$1.79.....	1	24.6	\$2.50 to \$2.59.....		
\$1.80 to \$1.89.....	2	31.8	\$2.60 to \$2.69.....	1	90.5
\$1.90 to \$1.99.....	1	35.8	\$2.70 to \$2.79.....		
\$2.00 to \$2.09.....	2	41.4	\$2.80 to \$2.89.....	1	96.2
\$2.10 to \$2.19.....			\$2.90 to \$2.99.....	1	100.0
\$2.20 to \$2.29.....	1	45.6			
\$2.30 to \$2.39.....	3	79.2	Total.....	14	100.0
\$2.40 to \$2.49.....	1	88.0			

The above table shows that had the operators sold their entire output at the prices fixed for *thick vein* by the President on August 21, 1917, about 25 per cent of the output would have shown a margin of 25 cents or over per ton. Had they sold the entire output at the *thin vein* prices, about 41 per cent of the output would have shown a margin of 25 cents per ton. As will be seen from Table 18 (see p. 56), 92 per cent of the output from District No. 7 in 1918 came from seams less than 4 feet thick, and 8 per cent from seams 4 feet and over in thickness. The 14 operators *actually* received a sales realization during August–October, 1917, of \$3.14 per ton, which left them an average margin of 95 cents per ton over their average f. o. b. mine cost of \$2.19 per ton.

Effective November 1, 1917, a 45-cent increase in the price of non-contracted coal was allowed by Executive order to take care of an increase in the wage scale which went into effect at that time. The labor cost for the period November, 1917–January, 1918, of the three operators shown in Table 44, increased 36 cents per ton (from \$1.37 per ton in September–October, 1917, to \$1.73 per ton in November, 1917–January, 1918). This increase is attributable to the higher wage scale. The average monthly production was 32,764 tons for November, 1917–January, 1918, practically the same as for September–October, 1917 (32,767 tons). Effective November 6, 1917, the Fuel Administration fixed, for the output of mines in the Deerfield or Palmyra Field, and in the Massillon Field, maximum prices (inclusive of the 45-cent price increase of November 1) as follows: run of mine, \$4.20; prepared sizes, \$4.45; slack, \$3.95. Since 7 of the 15 operators tabulated, and 48 per cent of the entire output shown for District No. 7, in 1918, belonged in the specified fields, the maximum prices of about half of the output of the district were substantially increased by the order of November 6. Had all the operators in the fields specified sold their entire output at the November 6 maximum prices, they would have received, using the already stated percentages of run of mine, prepared sizes, and slack coal, a possible realization of \$4.24 per ton. Of the three operators shown in Table 44, one operator who produced about one-third of the output was located in the Massillon field. Accordingly, the changes in price for this field are to some extent reflected in the average sales realizations for the three operators combined. Their average sales realization for the period November, 1917–January, 1918, was \$3.33 per ton, an increase of 39 cents over that for September–October, 1917. Their total f. o. b. mine cost for November, 1917–January, 1918, was \$2.52 per ton, an increase of 41 cents and their margin 81 cents per ton, a decrease of 2 cents. Effective January 23, 1918, the Fuel Administration made a reduction of 50 cents per ton in the maximum prices allowed for the Deerfield or Palmyra Field, and the Massillon Field. The average sales realization of the three operators in Table 44, for the period Feb-

ruary-March, 1918, was \$3.22, a decrease of 11 cents per ton from that of November, 1917-January, 1918. The total f. o. b. mine cost was \$2.39 per ton (a decrease of 13 cents). The average monthly production was 34,085 tons, an increase over that of the preceding period (32,764 tons). The margin was 83 cents per ton, an increase of 2 cents.

On April 1, 1918, practically the entire output of the district came under governmental regulation, most of the contracts entered into before August 21, 1917, having expired. The average total f. o. b. mine cost for the three operators during April-May, 1918, was \$2.21 per ton (a decrease of 18 cents from the average of November, 1917-March, 1918). This decrease is principally attributable to a decrease in the supplies cost, the average monthly production for April-May being 32,364 tons, a decrease as compared with 34,085 tons during the preceding period. The average sales realization for April-May, 1918, was \$3.01 per ton (a decrease of 21 cents), and the margin, 80 cents (a decrease of 3 cents). Effective May 25, 1918, the Fuel Administration made a reduction of 10 cents per ton in the existing maximum prices for the district. The total f. o. b. mine cost in June, 1918, was \$2.29 per ton (an increase of 8 cents over April-May, 1918), the sales realization \$3.04 (an increase of 3 cents), and the margin 75 cents per ton (a decrease of 5 cents). The production in June was 27,435 tons, a decrease from the average for April-May (32,364 tons).

Effective June 29, 1918, new maximum prices for the district were established by the Fuel Administration. The new prices which applied to the entire output of the district, regardless of the thickness of the seams and the fields from which derived, were (inclusive of the 45-cent price increase because of the November, 1917, wage increase) as follows: run of mine, \$3.45; prepared sizes, \$3.70; slack, \$3.30. Applying to these prices the proportion (already stated), which these three classes of coal form of the total output, a sales realization of \$3.51 per ton was possible, had the entire output been sold at such maximum prices. The sales realizations *actually* received by the three operators during the period July-August, 1918, was \$3.46 per ton, an increase of 42 cents over that of June, 1918. This increase is attributable to the change in official maximum prices. The total f. o. b. mine cost during July-August, 1918 was \$2.10 per ton (a decrease of 19 cents from that in June) and the margin, \$1.36 per ton (an increase of 61 cents over that in June). The production averaged 40,364 tons per month, during July-August, a marked increase over that in June (27,435 tons). Effective August 23, 1918, the Fuel Administration made a reduction of 5 cents per ton in the existing maximum prices for the district. The average sales realization of the three operators during September-December, 1918, was \$3.42 per ton, a decrease of 4 cents per ton from the preceding period. The

average total f. o. b. mine cost for September–December, 1918, was \$2.44 per ton, an increase of 34 cents over the average for July–August. This increase is attributable to the falling off in production. In October the production was 36,293 tons; in November, 27,699 tons; and in December, 27,758 tons. The decrease was principally due to the effect of the influenza epidemic, and to the slackening in the demand for coal, following the Armistice. The average monthly production for the four-month period was 32,215 tons. The average margin for September–December, 1918 was 98 cents per ton.

## DISTRICT NO. 8.

The significance of the eight periods selected for presenting the figures for 1916–1918 for District No. 8 is as follows:

The first four periods (year 1916, January–March, 1917, April–August, 1917, and September, 1917) have been described under District No. 2 (see pp. 70–71).

The period November, 1917–March, 1918, has been described under District No. 3 (see p. 78). The periods April–May, 1918, and June, 1918, have been described under District No. 2 (see pp. 70–71).

*July–December 1918.*—Effective June 29, 1918, the Fuel Administration established new maximum prices, which continued unchanged for this district throughout the year.

TABLE 46.—“Revised” costs and sales realizations of 14 operators mining about 7,500,000 tons annually in District No. 8 of Ohio, 1916–1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
	<i>Tons.</i>						
Year 1916.....	7,264,571	\$0.78	\$0.10	\$0.14	\$1.02	\$1.32	\$0.30
1917							
January.....	617,345	.84	.13	.16	1.13	2.21	1.06
February.....	469,373	.85	.16	.18	1.19	2.36	1.17
March.....	582,311	.83	.14	.15	1.12	2.02	.90
April.....	536,800	.91	.18	.17	1.26	2.35	1.09
May.....	640,794	.96	.17	.17	1.30	2.44	1.14
June.....	716,765	.92	.16	.16	1.24	2.56	1.32
July.....	657,076	.99	.17	.18	1.34	2.51	1.17
August.....	680,614	.97	.18	.21	1.39	2.57	1.18
September.....	621,345	1.00	.16	.25	1.41	2.51	1.10
October.....	666,125	.99	.20	.24	1.43	2.59	1.16
November.....	695,524	1.26	.23	.27	1.76	2.70	.94
December.....	573,865	1.28	.29	.29	1.86	2.55	.69
1918							
January.....	543,882	1.28	.22	.25	1.75	2.53	.78
February.....	509,403	1.30	.30	.28	1.88	2.53	.65
March.....	636,219	1.24	.30	.26	1.80	2.54	.74
April.....	709,748	1.21	.28	.22	1.71	2.42	.71
May.....	715,527	1.23	.28	.22	1.73	2.41	.68
June.....	735,105	1.23	.26	.23	1.72	2.38	.66
July.....	833,630	1.19	.27	.21	1.67	2.48	.81
August.....	790,290	1.23	.25	.22	1.70	2.49	.79
September.....	730,292	1.24	.26	.23	1.73	2.48	.75
October.....	738,978	1.27	.27	.21	1.78	2.48	.70
November.....	624,639	1.31	.29	.25	1.85	2.45	.60
December.....	567,494	1.36	.32	.32	2.00	2.23	.23

TABLE 46.—"Revised" costs and sales realizations of 14 operators mining about 7,500,000 tons annually in District No. 8 of Ohio, 1916-1918—Continued.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
	<i>Tons.</i>						
Year 1916.....	7,264,571	\$0.78	\$0.10	\$0.14	\$1.02	\$1.32	\$0.30
January-March, 1917.....	1,669,029	.84	.14	.16	1.14	2.19	1.05
April-August, 1917.....	3,232,049	.95	.17	.19	1.31	2.49	1.18
September-October, 1917.....	1,316,470	.99	.19	.24	1.42	2.55	1.13
November, 1917-March, 1918.....	2,868,893	1.27	.27	.27	1.81	2.57	.76
April-May, 1918.....	1,425,275	1.22	.28	.22	1.72	2.41	.69
June, 1918.....	735,105	1.23	.26	.23	1.72	2.38	.66
July-December, 1918.....	4,285,323	1.26	.27	.24	1.77	2.44	.67
Year 1916.....	7,264,571	.78	.10	.14	1.02	1.32	.30
Year 1917.....	7,396,937	.98	.18	.21	1.37	2.46	1.09
Year 1918.....	8,135,207	1.25	.28	.24	1.77	2.45	.68

TABLE 47.—"Revised" costs and sales realizations of 18 operators mining about 9,000,000 tons annually in District No. 8 of Ohio, 1917-1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
	<i>Tons.</i>						
1917.							
January.....	721,793	\$0.84	\$0.13	\$0.16	\$1.13	\$2.29	\$1.16
February.....	545,035	.86	.16	.18	1.20	2.43	1.23
March.....	685,913	.83	.14	.16	1.13	2.07	.94
April.....	635,859	.92	.17	.18	1.27	2.39	1.12
May.....	750,301	.96	.17	.18	1.31	2.53	1.22
June.....	837,150	.93	.17	.18	1.28	2.61	1.33
July.....	767,069	1.00	.19	.18	1.37	2.56	1.19
August.....	797,252	.98	.18	.27	1.43	2.63	1.20
September.....	711,641	1.01	.18	.26	1.45	2.57	1.12
October.....	808,546	.99	.21	.25	1.45	2.64	1.19
November.....	709,475	1.27	.22	.27	1.76	2.77	1.01
December.....	670,685	1.28	.28	.30	1.86	2.62	.76
1918.							
January.....	638,977	1.29	.22	.26	1.77	2.59	.82
February.....	603,323	1.30	.29	.28	1.87	2.58	.71
March.....	750,216	1.24	.29	.26	1.79	2.60	.81
April.....	831,235	1.21	.26	.22	1.69	2.46	.77
May.....	838,688	1.23	.27	.22	1.72	2.46	.74
June.....	902,559	1.23	.26	.22	1.71	2.42	.71
July.....	963,386	1.20	.26	.22	1.68	2.51	.83
August.....	932,529	1.24	.25	.23	1.72	2.51	.79
September.....	839,773	1.25	.26	.24	1.75	2.50	.75
October.....	853,606	1.27	.28	.25	1.80	2.49	.69
November.....	727,334	1.29	.30	.27	1.86	2.46	.60
December.....	661,055	1.36	.34	.33	2.03	2.25	.22
January-March, 1917.....	1,952,741	.85	.14	.16	1.15	2.25	1.10
April-August, 1917.....	3,757,621	.96	.18	.19	1.33	2.55	1.22
September-October, 1917.....	1,520,187	1.00	.19	.26	1.45	2.60	1.15
November, 1917-March, 1918.....	3,379,676	1.28	.26	.27	1.81	2.63	.82
April-May, 1918.....	1,669,923	1.22	.27	.22	1.71	2.46	.75
June, 1918.....	862,559	1.23	.26	.22	1.71	2.42	.71
July-December, 1918.....	4,947,693	1.26	.28	.25	1.79	2.46	.67
Year 1917.....	8,640,769	.99	.18	.22	1.39	2.52	1.13
Year 1918.....	9,478,681	1.25	.28	.24	1.77	2.49	.72

For 14 operators in District No. 8 it was possible to get information for 1916-1918. This is shown in Table 46. For four more operators, information was available for 1917 and 1918. Table 47 presents the

combined figures for the 18 operators for 1917 and 1918, including, therefore, the 14 shown in Table 46. The information in Table 47 covers about a million and a half tons more of annual production than that in Table 46, and to some extent is more representative of conditions in the district. On the other hand, the figures in Table 47 furnish no basis for comparison with 1916. Accordingly in this analysis of conditions in District No. 8 use will be made whenever necessary of the information contained in both tables. The information appearing in the first two divisions of Table 46 is shown in graphic form in Chart 10 (opposite p. 74).

Costs and sales realizations for the 14 operators were not obtained by months for 1916, but are combined figures for the calendar year. Their average labor cost for the year was 78 cents per ton, their total f. o. b. mine cost, \$1.02 per ton, their sales realization, \$1.32, and their margin, 30 cents per ton.

From January, 1917 on, the Commission presents monthly figures. The first quarter of 1917 showed the effect of the increased demand for coal on the "spot" market in a margin (\$1.05 per ton) much higher than the average for 1916 (30 cents per ton). The drop in sales realization from \$2.36 per ton in February to \$2.02 in March is probably due to the shipping out of coal to complete delivery on relatively low-priced contracts. The average f. o. b. mine cost for January-March, 1917, was \$1.14 per ton, and the sales realization, \$2.19.

The average labor cost during April-August, 1917, was 95 cents per ton, an increase of 11 cents over that for January-March, 1917 (84 cents per ton). This increase in cost is principally attributable to the higher wage scale, since the average monthly output during April-August was 646,410 tons, a considerable increase over the average for January-March (556,343 tons). On March 31, 1917, most of the contracts made early in 1916 expired. The sales realization rose during April and May, and in June reached \$2.56 per ton. It then dropped 5 cents to \$2.51 in July. This decrease is attributable in some measure to the public agitation over the high prices, one of the effects of which was the so-called "voluntary reduction" agreed upon at the operators' conference in Washington early in July. The average f. o. b. mine cost of the 14 operators during April-August, 1917, was \$1.31 per ton, their sales realization, \$2.49, and their margin, \$1.18 per ton.

On August 21, 1917, the Government first fixed prices under the Lever Act. The prices fixed by Executive order for the sale of coal not then under contract in this district on August 21, 1917, were as follows: "*Thin Vein*," run of mine, \$2.35; prepared sizes, \$2.60; slack, \$2.10; "*Thick Vein*," run of mine, \$2; prepared sizes, \$2.25; slack, \$1.75. The average proportions which these three classes of coal form of the total output, based on actual returns for all operators



in the district who reported to the Federal Trade Commission during the period August–December, 1917, are as follows: run of mine, 55 per cent; prepared sizes, 32 per cent; slack, 13 per cent. Had the entire output of the 14 operators been sold at the prices established August 21, 1917, for *thin vein*, it would have brought them a sales realization of \$2.40 per ton. Had it been sold at the *thick vein* prices it would have brought them a sales realization of \$2.05 per ton. The 14 operators in Table 46 *actually* received a sales realization of \$2.51 per ton during September and \$2.59 during October. The average total f. o. b. mine cost of the 14 operators during September–October, 1917, was \$1.42 per ton (11 cents higher than that for April–August, 1917), their sales realization was \$2.55 (6 cents higher), and their margin \$1.13 per ton (5 cents lower). Their average monthly output during September–October, 1917, was 658,235 tons, a slight increase over the average of April–August (646,410 tons).

The distribution of the total f. o. b. mine costs for 54 operators, who mined 4,148,878 tons in District No. 8 during the three months of August–October, 1917, is shown in the following table:

TABLE 48.—Total f. o. b. mine costs of 54 operators in District No. 8 of Ohio during August–October, 1917.

Total f. o. b. mine cost per ton by \$0.10 groupings.	Number of operators.	Accumulated per cent of output.	Total f. o. b. mine cost per ton by \$0.10 groupings.	Number of operators.	Accumulated per cent of output.
\$0.70 to \$0.79.....	1	1.3	\$1.60 to \$1.69.....	6	84.0
.80 to .89.....			1.70 to 1.79.....	8	96.2
.90 to .99.....			1.80 to 1.89.....	5	99.6
1.00 to 1.09.....	2	2.6	1.90 to 1.99.....	1	99.6
1.10 to 1.19.....	4	5.7	2.00 to 2.09.....		
1.20 to 1.29.....	7	37.0	2.10 to 2.19.....	1	99.7
1.30 to 1.39.....	6	53.9	2.20 and over.....	3	100.0
1.40 to 1.49.....	6	73.5			
1.50 to 1.59.....	4	81.2	Total.....	54	100.0

The above table shows that had the operators sold their entire output at the prices fixed for *thick vein* by the President on August 21, 1917, about 96 per cent of the output would have shown a margin of 25 cents or over per ton. Had they sold the entire output at the *thin vein* prices, about all of the output would have shown a margin of 25 cents per ton. As will be seen from Table 18 (see p. 56), 1 per cent of the output from District No. 8 in 1918 came from seams between 3 and 4 feet thick, and 99 per cent from seams 4 feet and over in thickness. The 54 operators *actually* received a sales realization during August–October, 1917, of \$2.72 per ton, which left them an average margin of \$1.33 per ton over their average f. o. b. mine cost of \$1.39 per ton.

Effective November 1, 1917, a 45-cent increase in the price of noncontracted coal was allowed by Executive order to take care of an increase in the wage scale which went into effect at that time.

The labor cost for the period November, 1917–March, 1918, of the 14 operators shown in Table 46, increased 28 cents per ton (from 99 cents per ton in September–October, 1917, to \$1.27 per ton in November, 1917–March, 1918). A portion of this increase is attributable to the higher wage scale, and a part to the decrease in the average monthly production which was 573,779 tons for November, 1917–March, 1918, as compared with 658,235 tons for September–October, 1917. The average total f. o. b. mine cost of the 14 operators for the period November, 1917–March, 1918, was \$1.81 per ton (an increase of 39 cents over September–October, 1917), the sales realization, \$2.57 (an increase of 2 cents), and the margin 76 cents per ton (a decrease of 37 cents). On March 21, 1918, the Fuel Administration abolished the price distinction between “*thick vein*” and “*thin vein*” coal by reaffirming for the entire output of this district the prices hitherto established for “*thick-vein*” coal. On April 1, 1918, practically the entire output of the district came under governmental regulation, most of the contracts entered into before August 21, 1917, having expired. The average total f. o. b. mine cost for the 14 operators during April–May, 1918, was \$1.72 per ton (a decrease of 9 cents from the average of November, 1917–March, 1918). This decrease is principally attributable to an increase in production, the average monthly production for April–May being 712,638 tons as compared with 573,779 tons during the preceding period. The average sales realization for April–May, 1918, was \$2.41 per ton (a decrease of 16 cents), and the margin 69 cents (a decrease of 7 cents). Effective May 25, 1918, the Fuel Administration made a reduction of 10 cents per ton in the existing maximum prices for the district. The total f. o. b. mine cost in June was \$1.72 per ton (the same as April–May, 1918), the sales realization \$2.38 (a decrease of 3 cents), and the margin 66 cents per ton (a decrease of 3 cents). The production in June was 735,105 tons, a slight increase from the average for April–May (712,638 tons).

Effective June 29, 1918, new maximum prices for the district were established by the Fuel Administration. The new prices were (inclusive of the 45-cent price increase because of the November, 1917, wage increase) as follows: run of mine, \$2.35; prepared sizes, \$2.60; slack, \$2.35. Applying to these prices the proportions (already stated), which these three classes of coal form of the total output, a sales realization of \$2.43 per ton was possible, had the entire output been sold at such maximum prices. The sales realization *actually* received by the 14 operators during the period July–December, 1918, was \$2.44 per ton, an increase of 6 cents over that of June, 1918. The average total f. o. b. mine cost for July–December, 1918, was \$1.77 per ton, an increase of 5 cents over the average for June. This increase is attributable to the falling off in pro-

duction which shows a general decrease from 833,630 tons in July to 567,494 tons in December. In October the production was 738,978 tons; in November, 624,639 tons; and in December, 567,494 tons. The decrease was principally due to the effect of the influenza epidemic and to the slackening in the demand for coal, following the Armistice. The average monthly production for the six-month period was 714,221 tons. The average margin for July-December, 1918, was 67 cents per ton.

The costs and sales realizations shown for the 18 operators in Table 47 correspond closely during 1917 and 1918 to those of the 14 operators in Table 46.

### 3. Relation of the Cost Subdivisions to the Total f. o. b. Mine Costs.

The following tables, based on "Revised" costs, show the distribution by specified periods between the items of labor, supplies, and general expense of each dollar in the total f. o. b. mine cost:

TABLE 49.—*Distribution between labor, supplies, and general expense of each dollar of total f. o. b. mine cost, 1916-1918, by specified periods, and by calendar years for 3 operators producing about 250,000 tons annually in District No. 2 of Ohio.*

Period.	Labor.	Supplies.	General expense.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	73	9	18
January-March, 1917.....	74	9	17
April-August, 1917.....	73	12	15
September-October, 1917.....	77	6	17
November, 1917-January, 1918.....	77	7	16
February-March, 1918.....	77	5	18
April-May, 1918.....	75	8	17
June, 1918.....	76	8	16
July-August, 1918.....	77	10	13
September-December, 1918.....	75	9	16
Year, 1916.....	73	9	18
Year, 1917.....	75	9	16
Year, 1918.....	75	9	16

TABLE 50.—*Distribution between labor, supplies, and general expense of each dollar of total f. o. b. mine cost, 1916-1918, by specified periods, and by calendar years for 6 operators producing about 2,750,000 tons annually in District No. 3 of Ohio.*

Period.	Labor.	Supplies.	General expense.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	72	9	19
January-March, 1917.....	75	9	16
April-August, 1917.....	74	11	15
September-October, 1917.....	71	14	15
November, 1917-March, 1918.....	73	13	14
April-May, 1918.....	73	13	14
June, 1918.....	74	13	13
July-August, 1918.....	75	13	12
September-December, 1918.....	72	14	14
Year, 1916.....	72	9	19
Year, 1917.....	73	12	15
Year, 1918.....	74	13	13

TABLE 51.—*Distribution between labor, supplies, and general expense of each dollar of total f. o. b. mine cost, 1916-1918, by specified periods, and by calendar years for 3 operators producing about 550,000 tons annually in District No. 4 of Ohio.*

Period.	Labor.	Supplies	General expense.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	78	12	10
January-March, 1917.....	77	13	10
April-August, 1917.....	75	17	8
September-October, 1917.....	74	18	8
November, 1917-March, 1918.....	75	15	10
April-May, 1918.....	76	13	11
June, 1918.....	78	13	9
July-August, 1918.....	78	12	10
September-December, 1918.....	76	14	10
Year, 1916.....	78	12	10
Year, 1917.....	75	16	9
Year, 1918.....	76	13	11

TABLE 52.—*Distribution between labor, supplies, and general expense of each dollar of total f. o. b. mine cost, 1916-1918, by specified periods, and by calendar years for 5 operators producing about 4,750,000 tons annually in Districts Nos. 5 and 9 (combined) of Ohio.*

Period.	Labor.	Supplies.	General expense.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	80	8	12
January-March, 1917.....	79	9	12
April-August, 1917.....	78	10	12
September-October, 1917.....	72	13	15
November, 1917-March, 1918.....	76	11	13
April-May, 1918.....	79	10	11
June, 1918.....	77	12	11
July-August, 1918.....	78	12	10
September-December, 1918.....	76	13	11
Year, 1916.....	80	8	12
Year, 1917.....	78	11	13
Year, 1918.....	77	12	11

TABLE 53.—*Distribution between labor, supplies, and general expense of each dollar of total f. o. b. mine cost, 1916-1918, by specified periods, and by calendar years for 12 operators producing about 1,750,000 tons annually in District No. 6 of Ohio.*

Period.	Labor.	Supplies.	General expense.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	77	9	14
January-March, 1917.....	75	11	14
April-August, 1917.....	73	14	13
September-October, 1917.....	65	20	15
November, 1917-March, 1918.....	72	16	12
April-May, 1918.....	74	14	12
June, 1918.....	73	16	11
July-August, 1918.....	72	17	11
September-December, 1918.....	69	19	12
Year, 1916.....	77	9	14
Year, 1917.....	71	16	13
Year, 1918.....	72	17	11

TABLE 54.—*Distribution between labor, supplies, and general expense of each dollar of total f. o. b. mine cost, 1916-1918, by specified periods, and by calendar years for 3 operators producing about 375,000 tons annually in District No. 7 of Ohio.*

Period.	Labor.	Supplies.	General expense.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	78	6	16
January-March, 1917.....	78	9	15
April-August, 1917.....	74	9	17
September-October, 1917.....	65	12	23
November, 1917-January, 1918.....	69	12	19
February-March, 1918.....	69	16	15
April-May, 1918.....	75	11	14
June-1918.....	73	10	17
July-August, 1918.....	75	7	18
September-December, 1918.....	75	8	17
Year, 1916.....	78	6	16
Year, 1917.....	72	10	18
Year, 1918.....	73	10	17

TABLE 55.—*Distribution between labor, supplies, and general expense of each dollar of total f. o. b. mine cost, 1916-1918, by specified periods, and by calendar years for 14 operators producing about 7,500,000 tons annually in District No. 8 of Ohio.*

Period.	Labor.	Supplies.	General expense.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	78	10	14
January-March, 1917.....	74	12	14
April-August, 1917.....	73	13	14
September-October, 1917.....	70	13	17
November, 1917-March, 1918.....	70	15	15
April-May, 1918.....	71	16	13
June, 1918.....	72	15	13
July-December, 1918.....	71	15	14
Year 1916.....	76	10	14
Year 1917.....	72	13	15
Year 1918.....	71	16	13

The foregoing tables show that while there was a slight variation from period to period, on the whole, the proportion of the labor cost to the total f. o. b. mine cost differed little throughout 1916-1918 in each district.

#### 4. Relative Increases in the Various Costs, 1916-1918.

In the following table are shown the relative increases in the various costs during 1917-1918 for the different districts as compared with the costs for the year 1916:

TABLE 56.—*Relative increases in the various average costs, by districts, 1917-1918, as compared with the year 1916, for 46 operators producing about 18,000,000 tons annually.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine cost.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
District No. 2:	<i>B.</i>	<i>B.</i>	<i>B.</i>	<i>B.</i>
Year 1916.....	6	14	0	6
January-March, 1917.....	38	93	14	39
April-August, 1917.....	52	7	25	45
September-October, 1917.....	95	64	66	87
November, 1917-January, 1918.....	88	14	76	80
February-March, 1918.....	84	71	76	82
April-May, 1918.....	95	79	69	89
June, 1918.....	82	93	32	74
July-August, 1918.....	90	93	66	86
September-December, 1918.....				

TABLE 56.—*Relative increases in the various average costs, by districts, 1917–1918, as compared with the year 1916, for 48 operators producing about 18,000,000 tons annually—Continued.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine cost.
<b>District No. 2:</b>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Year 1916.....	B.	B.	B.	B.
January–March, 1917.....	6	0	14	2
April–August, 1917.....	24	35	0	21
September–October, 1917.....	25	109	9	39
November, 1917–March, 1918.....	80	136	27	77
April–May, 1918.....	69	127	23	67
June, 1918.....	74	136	18	69
July–August, 1918.....	73	118	9	66
September–December, 1918.....	83	173	41	84
<b>District No. 4:</b>	B.	B.	B.	B.
Year 1916.....	15	0	0	14
January–March, 1917.....	12	53	0	16
April–August, 1917.....	19	80	0	25
September–October, 1917.....	56	93	58	61
November, 1917–March, 1918.....	50	60	75	58
April–May, 1918.....	62	67	59	62
June, 1918.....	56	53	58	56
July–August, 1918.....	63	87	75	68
<b>Districts Nos. 5 and 9 (combined):</b>	B.	B.	B.	B.
Year 1916.....	8	25	8	9
January–March, 1917.....	26	63	33	30
April–August, 1917.....	28	125	83	42
September–October, 1917.....	66	150	83	70
November, 1917–March, 1918.....	61	113	56	64
April–May, 1918.....	69	150	67	75
June, 1918.....	64	150	50	69
July–August, 1918.....	71	200	67	81
<b>District No. 6:</b>	B.	B.	B.	B.
Year 1916.....	6	36	6	9
January–March, 1917.....	25	109	19	31
April–August, 1917.....	82	245	71	57
September–October, 1917.....	67	209	53	78
November, 1917–March, 1918.....	68	173	41	70
April–May, 1918.....	63	209	35	73
June, 1918.....	62	227	35	74
July–August, 1918.....	75	309	71	96
<b>District No. 7:</b>	B.	B.	B.	B.
Year 1916.....	6	56	4	9
January–March, 1917.....	17	78	28	22
April–August, 1917.....	22	189	108	47
September–October, 1917.....	55	233	113	75
November, 1917–January, 1918.....	48	311	67	66
February–March, 1918.....	47	167	39	54
April–May, 1918.....	50	144	70	59
June, 1918.....	41	67	61	46
July–August, 1918.....	71	122	83	69
<b>District No. 8:</b>	B.	B.	B.	B.
Year 1916.....	8	40	14	12
January–March, 1917.....	22	70	36	28
April–August, 1917.....	27	90	71	39
September–October, 1917.....	63	170	93	77
November, 1917–March, 1918.....	56	180	57	69
April–May, 1918.....	58	160	64	66
June, 1918.....	62	170	71	74

B = Base.

+ Decrease.

The most significant increase was in the labor cost. It ranged from 62 per cent in District No. 8 to 90 per cent in District No. 2, above that in 1916. The rates of increase in the supply cost, which ranged from 87 per cent in District No. 4 to 309 per cent in District No. 6, while in most cases much larger than those of the labor cost,

had much less effect on the increase of the total f. o. b. mine cost, since, as shown in Tables 49-55, the annual supplies cost averaged from 6 to 16 per cent of the total f. o. b. mine cost, while the labor cost formed from 71 to 80 per cent.

### 5. Changes in the Relation of Costs to Sales Realizations.

The following tables, based on the "Revised" costs and sales realizations shown in Tables 32, 35, 38, 40, 42, 44, and 46 (see pp. 72, 79, 85, 89, 94, 99, and 104), show the distribution for specified periods between the items of labor, supplies, general expense, and margin to operator, of each dollar paid for coal to the operator by the purchaser:

TABLE 57.—*Distribution of the amount paid by the purchaser between the various principal costs and the margin, based on each dollar of sales realization, 1916-1918, by specified periods and by calendar years, for 3 operators producing about 250,000 tons annually in District No. 2 of Ohio.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
	Cents.	Cents.	Cents.	Cents.	Cents.
Year 1916.....	67	8	16	91	9
January-March, 1917.....	46	6	11	63	37
April-August, 1917.....	58	9	12	79	21
September-October, 1917.....	67	6	14	87	13
November, 1917-January, 1918.....	64	6	13	83	17
February-March, 1918.....	59	4	13	76	24
April-May, 1918.....	62	7	14	83	17
June, 1918.....	65	7	14	86	14
July-August, 1918.....	62	8	11	81	19
September-December, 1918.....	65	8	14	87	13
Year 1916.....	67	8	16	91	9
Year 1917.....	57	7	12	76	24
Year 1918.....	63	7	13	83	17

TABLE 58.—*Distribution of the amount paid by the purchaser between the various principal costs and the margin, based on each dollar of sales realization, 1916-1918, by specified periods and by calendar years, for 6 operators producing about 2,750,000 tons annually in District No. 3 of Ohio.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
	Cents.	Cents.	Cents.	Cents.	Cents.
Year 1916.....	61	8	16	85	15
January-March, 1917.....	42	5	9	56	44
April-August, 1917.....	45	6	9	60	40
September-October, 1917.....	49	10	10	69	31
November, 1917-March, 1918.....	60	10	11	81	19
April-May, 1918.....	55	10	10	75	25
June, 1918.....	58	10	11	79	21
July-August, 1918.....	56	9	9	74	26
September-December, 1918.....	60	12	12	84	16
Year 1916.....	61	8	16	85	15
Year 1917.....	47	7	10	64	36
Year 1918.....	58	10	11	79	21

TABLE 59.—*Distribution of the amount paid by the purchaser between the various principal costs and the margin, based on each dollar of sales realization, 1916-1918, by specified periods and by calendar years, for 3 operators producing about 550,000 tons annually in District No. 4 of Ohio.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	62	10	8	80	20
January-March, 1917.....	31	5	5	41	59
April-August, 1917.....	43	10	5	58	42
September-October, 1917.....	47	12	5	64	36
November, 1917-March, 1918.....	56	11	7	74	26
April-May, 1918.....	57	9	8	74	26
June, 1918.....	57	9	7	73	27
July-August, 1918.....	49	8	6	63	37
September-December, 1918.....	53	10	7	70	30
Year 1916.....	62	10	8	80	20
Year 1917.....	43	9	5	57	43
Year 1918.....	54	9	8	71	29

TABLE 60.—*Distribution of the amount paid by the purchaser between the various principal costs and the margin, based on each dollar of sales realization, 1916-1918, by specified periods and by calendar years, for 5 operators producing about 4,750,000 tons annually in Districts Nos. 5 and 9 (combined) in Ohio.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	66	7	10	83	17
January-March, 1917.....	45	5	7	57	43
April-August, 1917.....	39	5	6	50	50
September-October, 1917.....	38	7	8	53	47
November, 1917-March, 1918.....	50	7	8	65	35
April-May, 1918.....	52	7	8	67	33
June, 1918.....	56	8	8	72	28
July-August, 1918.....	49	7	7	63	37
September-December, 1918.....	53	9	8	70	30
Year 1916.....	66	7	10	83	17
Year 1917.....	41	6	7	54	46
Year 1918.....	52	8	7	67	33

TABLE 61.—*Distribution of the amount paid by the purchaser between the various principal costs and the margin, based on each dollar of sales realization, 1916-1918, by specified periods and by calendar years, for 12 operators producing about 1,750,000 tons annually in District No. 6 of Ohio.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	62	7	11	80	20
January-March, 1917.....	40	6	7	53	47
April-August, 1917.....	38	8	7	53	47
September-October, 1917.....	42	13	10	65	35
November, 1917-March, 1918.....	51	11	9	71	29
April-May, 1918.....	55	11	8	74	26
June, 1918.....	56	13	8	77	23
July-August, 1918.....	50	12	8	70	30
September-December, 1918.....	56	15	10	81	19
Year 1916.....	62	7	11	80	20
Year 1917.....	41	9	8	58	42
Year 1918.....	54	12	9	75	25



TABLE 62.—*Distribution of the amount paid by the purchaser between the various principal costs and the margin, based on each dollar of sales realization, 1916-1918, by specified periods and by calendar years, for 3 operators producing about 375,000 tons annually in District No. 7 of Ohio.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	63	5	13	81	19
January-March, 1917.....	43	5	9	57	43
April-August, 1917.....	41	5	9	55	45
September-October, 1917.....	47	9	16	72	28
November, 1917-January, 1918.....	52	9	15	76	24
February-March, 1918.....	55	11	11	74	26
April-May, 1918.....	55	8	10	73	27
June, 1918.....	55	7	13	75	25
July-August, 1918.....	46	4	11	61	39
September-December, 1918.....	53	6	12	71	29
Year 1916.....	63	5	13	81	19
Year 1917.....	44	6	12	62	38
Year 1918.....	52	7	12	71	29

TABLE 63.—*Distribution of the amount paid by the purchaser between the various principal costs and the margin, based on each dollar of sales realization, 1916-1918, by specified periods and by calendar years, for 14 operators producing about 7,500,000 tons annually in District No. 8 of Ohio.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	59	7	11	77	23
January-March, 1917.....	39	6	7	52	48
April-August, 1917.....	38	7	8	53	47
September-October, 1917.....	38	8	10	56	44
November, 1917-March, 1918.....	48	11	11	70	30
April-May, 1918.....	51	11	9	71	29
June, 1918.....	52	11	9	72	28
July-December, 1918.....	52	11	10	73	27
Year 1916.....	59	7	11	77	23
Year 1917.....	40	7	9	56	44
Year 1918.....	51	11	10	72	28

These facts are shown in graphic form in Chart 11 (opposite).

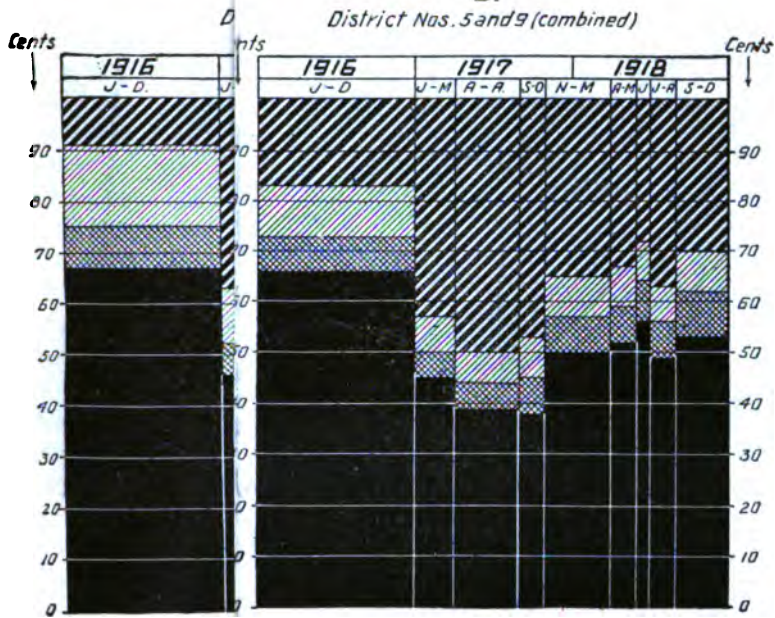
The margin varied greatly from period to period in each district. The lowest margin (9 cents out of the dollar) for any period was for the year 1916 in District No. 2. The highest margin (59 cents out of the dollar) for any period was for January-March 1917 in District No. 4.

It must not, however, be supposed that such margins were all clear profit to the operators. As has been pointed out, the Commission's "Revised" cost figures exclude any charges for interest, income and excess profits taxes, donations, etc., which are expenditures that, while not entering into operating cost, must be met from the margin; nor is there any allowance in the total f. o. b. mine cost for the expense of selling the coal.

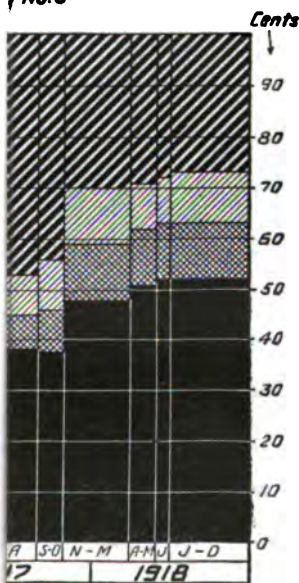
CHART-11. Dried periods in 1916, 1917, and 1918 in Ohio

*D.*

*District Nos. 5 and 9 (combined)*



**f No. 8**



*Margin*



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Of the 256 operators in Ohio whose costs were obtained for 1918, 145 reported a selling expense on their coal, and 111 did not report any. For those that did report, the "Claimed" selling expense varied from one-tenth cent per ton to 33 cents per ton, the average being 6 cents per ton.

It is fair to assume that a very large part of the output of the operators who reported no selling expense (forming 43 per cent of all operators reporting in Ohio) reached the consumer through the jobbers or sales agencies. Probably also a considerable fraction of the output of the remaining 57 per cent of the operators went through such channels.

That part of the output sold through jobbers is sold f. o. b. at the mine, and there is little or no selling expense to be considered, since it is taken care of in the sales realization, and would not come out of margin.

Considering the total investment as the amount necessary to operate the business, whether in the form of capital stock and surplus, bonds or other borrowed money, the return on the total investment in the business, after deducting the estimated average selling expense from the margin and before deducting interest on borrowed money or Federal income and excess profits taxes, is shown in the statement following for the years 1916, 1917, and 1918, for the 46 operators who produced about 18,000,000 tons annually.

	District No. 2.			District No. 3.			District No. 4.			Districts Nos. 5 and 9 (combined).		
	1916	1917	1918	1916	1917	1918	1916	1917	1918	1916	1917	1918
Margin between f. o. b. mine cost and sales realization.....	\$0.17	\$0.70	\$0.59	\$0.21	\$0.82	\$0.55	\$0.31	\$1.04	\$0.81	\$0.21	\$1.13	\$0.86
Estimated selling expense.....	.08	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06	.06
Amount per ton earned on investment before deducting interest on borrowed money and Federal income and excess profits taxes.....	.11	.64	.53	.15	.76	.49	.25	1.02	.75	.15	1.07	.80

	District No. 6.			District No. 7.			District No. 8.		
	1916	1917	1918	1916	1917	1918	1916	1917	1918
Margin between f. o. b. mine cost and sales realization.....	\$0.30	\$1.20	\$0.73	\$0.34	\$1.17	\$0.97	\$0.30	\$1.09	\$0.64
Estimated selling expense.....	.06	.06	.06	.06	.06	.06	.06	.06	.06
Amount per ton earned on investment before deducting interest on borrowed money and Federal income and excess profits taxes.....	.24	1.14	.67	.28	1.11	.91	.24	1.03	.62



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**CHAPTER III.**

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**INDIANA.**

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# CHAPTER III—INDIANA.

## Part I.—INTRODUCTION.

### 1. Definition of the Various Producing Districts or Fields.

The distribution of output between the various coal-producing districts in Indiana has been made in accordance with the character of coal produced in those districts, as defined by the Fuel Administration in its order fixing prices in the State, effective May 1, 1918. The output comprised in the different districts is as follows:

District No. 1, to wit: Coal mined in the State of Indiana, other than Brazil-Block.  
Brazil-Block District, to wit: Output of operators mining Brazil-Block coal.

The location of these districts is shown on the map of Indiana (opposite p. 120), the area of the Brazil-Block District being drawn so as to include all mines from which the Commission received reports on the production of Brazil-Block coal.

### 2. General Statistics of Output.

The statistics in this section for coal produced in Indiana have been compiled from reports published by the United States Geological Survey.

The proportion which the output of Indiana has formed of the total bituminous coal output of the United States is as follows:

	Per cent.		Per cent.
1911.....	3.5	1915.....	3.8
1912.....	3.4	1916.....	4.0
1913.....	3.6	1917.....	4.8
1914.....	3.9	1918.....	5.3

Since the Geological Survey statistics are shown by counties and the State as a whole, the tonnage produced in counties which lie in more than one of the producing districts, as described above, has been allocated to the different districts in the proportions of the tonnage of those counties as shown in operator's reports to the Commission for 1918. The following statement shows the proportions which the output of the two districts forms of the State total.

Year.	State production.	Proportion of total produced in each district.	
		No. 1.	Brazil-Block.
	Tons.	Per cent.	Per cent.
1911.....	14,201,356	98	2
1912.....	15,285,718	98	2
1913.....	17,165,671	97	3
1914.....	16,641,132	98	2
1915.....	17,006,162	99	1
1916.....	20,093,528	98	2
1917.....	26,539,329	98	2



The State Department of Mines and Mining of Indiana publishes statistics showing the output of Brazil-Block coal separate from that of the other bituminous operators. The following statistics<sup>1</sup> are for the fiscal years ending September 30 and while not strictly comparable with those shown above, which are based on calendar years, furnish a certain degree of comparison.

Fiscal year ending—	State production.	Proportion of total produced in each district.	
		No. 1.	Brazil-Block.
	Tons.	Per cent.	Per cent.
Sept. 30, 1917.....	24, 013, 021	98	2
Sept. 30, 1918.....	28, 795, 682	98	2

The United States Geological Survey has collected information on the "average value per ton" for a long series of years. This average is obtained by dividing the total selling value by the total tonnage.<sup>2</sup> The following table shows this information for 1911–1917, that for the districts having been compiled from the Survey county figures, by the method outlined above:

TABLE 64.—*Production and average value, 1911–1917, by producing districts and State of Indiana.*

Year.	District No. 1.		Brazil—Block District.		State.	
	Production.	Average value per ton.	Production.	Average value per ton.	Production.	Average value per ton.
	Tons.		Tons.		Tons.	
1911.....	13, 850, 342	\$1. 07	342, 013	\$1. 28	14, 201, 355	\$1. 08
1912.....	14, 949, 982	1. 14	335, 736	1. 35	15, 285, 718	1. 14
1913.....	16, 703, 943	1. 10	461, 728	1. 21	17, 165, 671	1. 11
1914.....	16, 296, 770	1. 10	344, 362	1. 29	16, 641, 132	1. 10
1915.....	16, 782, 540	1. 09	223, 612	1. 34	17, 006, 152	1. 10
1916.....	19, 789, 344	1. 26	304, 184	1. 72	20, 093, 528	1. 27
1917.....	26, 119, 750	1. 99	419, 579	2. 19	26, 539, 329	1. 99

In its reports for 1916 and 1917 the Geological Survey published "average" values in more detail than in previous reports. The

<sup>1</sup> Year Books of the State of Indiana for the years 1917 and 1918.

<sup>2</sup> The value of coal given in this report is the realization value at the mine f. o. b. cars, and the average value per ton is the average realization price obtained by dividing the total value by the number of tons sold or produced. The coal used at the mine, the coal coked by the producing company, and the coal used in some other industry by the company operating the mine—an appreciable proportion of the whole—is never sold, and the value placed upon it is either an estimate or the figure at which it is carried on the books, either of which is supposedly based on what the coal would have brought if sold or what other fuel for the respective purpose would have cost if its purchase had been necessary. In other words, the values given represent returns to the operators for coal sold, plus estimated exchange value of that not sold. These figures do not necessarily show prices or even an average of the prices of coal at the mine. U. S. Geological Survey. (Mineral Resources of the United States, 1917. Part II, page 952.)





following table is compiled from statistics appearing in the 1916 and 1917 reports:

TABLE 65.—*Disposition of production, and average values, by producing districts and State of Indiana, 1916-1917.*

District.	Loaded at mines for shipment.				Sold to local trade and used by employees.			
	1916		1917		1916		1917	
	Production.	Average value per ton.	Production.	Average value per ton.	Production.	Average value per ton.	Production.	Average value per ton.
No. 1.....	<i>Tons.</i> 18,576,207	\$1.26	<i>Tons.</i> 24,628,645	\$1.99	<i>Tons.</i> 762,151	\$1.46	<i>Tons.</i> 869,186	\$2.03
Brazil-Block.....	263,361	1.71	362,532	2.21	28,194	1.72	36,415	2.21
State.....	18,839,568	1.27	24,991,177	2.00	790,345	1.47	905,601	2.03

District.	Used at mines for steam and heat.				Total.			
	1916		1917		1916		1917	
	Production.	Average value per ton.	Production.	Average value per ton.	Production.	Average value per ton.	Production.	Average value per ton.
No. 1.....	<i>Tons.</i> 450,986	\$1.03	<i>Tons.</i> 621,919	\$1.83	<i>Tons.</i> 19,789,344	\$1.26	<i>Tons.</i> 26,119,750	\$1.99
Brazil-Block.....	12,629	1.17	20,632	1.96	304,184	1.72	419,579	2.19
State.....	463,615	1.04	642,551	1.83	20,093,528	1.27	26,539,329	1.99

## Part II.—1918 COSTS AND SALES REALIZATIONS.

### 1. Number and Extent of Operations Covered.

The 1918 production of the 133 operators in Indiana from whom cost reports were obtained by the Commission was as follows:

District No. 1:	Tons.	Per cent.
92 operators from whom costs were obtained for 12 months....	25, 753, 948	92. 1
2 operators from whom costs were obtained for 12 months but which were excluded for certain reasons.....	222, 829	. 8
23 operators from whom costs were obtained for less than the full 12 months (actual tonnage reported 1,168,962 tons) estimated yearly tonnage.....	1, 989, 276	7. 1
Total.....	27, 966, 053	100. 0
Brazil-Block district:		
10 operators from whom costs were obtained for 12 months....	692, 392	74. 6
1 operator from whom costs were obtained for 12 months but which were excluded for certain reasons.....	10, 478	1. 1
5 operators from whom costs were obtained for less than the full 12 months (actual tonnage reported 124,492 tons) estimated yearly tonnage.....	225, 744	24. 3
Total.....	928, 614	100. 0
State:		
102 operators from whom costs were obtained for 12 months...	26, 446, 340	91. 5
3 operators from whom costs were obtained for 12 months but which were excluded for certain reasons.....	233, 307	. 8
28 operators from whom costs were obtained for less than the full 12 months (actual tonnage reported 1,293,454 tons) estimated yearly tonnage.....	2, 215, 020	7. 7
Total.....	28, 894, 667	100. 0

The above figures are shown *inclusive* of power-house fuel for comparison with the United States Geological Survey statistics. The total output of the 102 operators from whom costs were obtained for 12 months was, *exclusive of power-house fuel*, 25,832,751 tons.

According to statistics issued by the Geological Survey, the output of Indiana during 1918 was 30,678,634 tons, of which 775,276 tons were used at the mine for steam and heat. The Commission obtained cost information on 27,973,101 tons (including power-house fuel), produced in Indiana in 1918, forming 91 per cent of the total for Indiana as reported by the Geological Survey. It publishes in this report cost information on 25,832,751 tons of commercial production, which is 86 per cent of the output reported for the State by the Geological Survey, after the exclusion of mine fuel.

## 2. Classification of Producers by Number of Mines Operated.

The costs of the 102 operators shown in the tabulations for the Indiana districts cover the output of 165 mines. The following table shows the number of mines operated by the different producers:

TABLE 66.—Number of mines operated by different producers in Indiana.

Number of mines run by each operator.	Number of operators.	Proportion of total number.	Production tonnage, 1913.	Proportion of total production.
<b>District No. 1:</b>		<i>Per cent.</i>	<i>Tons.</i>	<i>Per cent.</i>
1 mine.....	66	71.7	11,070,133	44.0
2 mines.....	14	15.2	3,267,434	12.0
3 mines.....	6	6.5	3,302,638	13.1
4 mines.....	3	3.3	1,779,909	7.1
5 mines.....	1	1.1	1,798,107	7.1
7 mines.....	1	1.1	917,337	3.6
17 mines.....	1	1.1	3,043,454	12.1
Total (number of mines, 153).....	92	100.0	25,179,012	100.0
<b>Brazil-Block District:</b>				
1 mine.....	8	80.0	462,808	70.8
2 mines.....	2	20.0	190,931	29.2
Total (number of mines, 12).....	10	100.0	653,739	100.0
<b>State:</b>				
1 mine.....	74	72.5	11,532,941	44.6
2 mines.....	16	15.7	3,458,365	13.4
3 mines.....	6	5.9	3,302,638	12.8
4 mines.....	3	2.9	1,779,909	6.9
5 mines.....	1	1.0	1,798,107	7.0
7 mines.....	1	1.0	917,337	3.5
17 mines.....	1	1.0	3,043,454	11.8
Total (number of mines, 165).....	102	100.0	25,832,751	100.0

It will be seen that 74 producers (72.5 per cent of the total number shown in the table) operated only one mine each and produced 44.6 per cent of the output, and 16 producers (15.7 per cent of the total number) operated two mines each and produced 13.4 per cent of the output. There were 12 producers (11.8 per cent of the total number) operating more than two mines, who produced 42 per cent of the output. The greatest proportion of one-mine operators (80 per cent) was in the Brazil-Block District. They produced 70.8 per cent of the output of the district. In District No. 1 the proportions were similar to those for the State.

The following statement shows the average number of mines operated by a producer, and the average production per mine operated by one-mine operators and by operators of two or more mines, for each district and for the State of Indiana:

District.	Average number of mines operated by a producer.	Average production per mine operated by—		
		One-mine operators.	Operators of two or more mines.	All operators combined.
	<i>Mines.</i>	<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>
No. 1.....	1.7	167,729	162,171	164,560
Brazil-Block.....	1.2	57,651	47,738	54,478
State.....	1.6	155,851	157,141	156,502

The number and size of mines in Indiana are shown in further detail in the report for 1917 of the United States Geological Survey from which the following statistics are derived.<sup>1</sup>

Annual output of mines.	Mines.		Tonage.	
	Number.	Proportion of total in State.	Average production per mine. <sup>1</sup>	Proportion of total State output.
		<i>Per cent.</i>	<i>Tons.</i>	<i>Per cent.</i>
200,000 tons and over.....	52	12.6	321,310	62.9
100,000 to 199,999 tons.....	41	9.9	155,221	24.0
50,000 to 99,999 tons.....	30	7.3	67,731	7.7
10,000 to 49,999 tons.....	46	11.1	23,590	4.1
Under 10,000 tons.....	245	53.1	1,429	1.3
State.....	414	100.0	64,105	100.0

<sup>1</sup> Including power-house fuel.

### 3. Classification of Producers by Size of Output.

The 102 producers tabulated are classified by size of their output in 1918, exclusive of power-house fuel, as follows:

TABLE 67.—*Classification of 102 Indiana operators by size of output.*

Production during 1918.	Number of operators.	Proportion of total number.	Tonnage produced, 1913	Proportion of total production.
		<i>Per cent.</i>	<i>Tons.</i>	<i>Per cent.</i>
District No. 1:				
Under 50,000 tons.....	12	13.0	307,508	1.2
50,000 to 99,999 tons.....	18	19.6	1,434,237	5.7
100,000 to 499,999 tons.....	51	55.4	11,524,062	45.8
500,000 to 999,999 tons.....	7	7.6	4,874,335	19.4
1,000,000 tons and over.....	4	4.4	7,038,770	27.9
Total.....	92	100.0	25,179,012	100.0
Brazil-Block District:				
Under 50,000 tons.....	3	30.0	117,779	18.0
50,000 to 99,999 tons.....	5	50.0	298,900	45.7
100,000 to 499,999 tons.....	2	20.0	237,160	36.3
Total.....	10	100.0	653,739	100.0
State:				
Under 50,000 tons.....	15	14.7	425,287	1.6
50,000 to 99,999 tons.....	23	22.5	1,733,137	6.7
100,000 to 499,999 tons.....	53	52.0	11,761,222	45.5
500,000 to 999,999 tons.....	7	6.9	4,871,335	18.9
1,000,000 tons and over.....	4	3.9	7,038,770	27.3
Total.....	102	100.0	25,832,751	100.0

If the 28 operators from whom costs were received for less than 12 months during 1918 and the 3 operators from whom costs were received, but in unusable form, be considered, it would be found that 9 operators had an estimated yearly production of over 100,000 tons each (averaging 155,834 tons). The remaining 22 operators had an average estimated yearly production of 47,537 tons. Had reports for the full 12 months been available from them it would be found

<sup>1</sup> Mineral Resources of the United States, 1917. Part II, pp. 947-948.

that about 45 per cent of the operators, who mined less than 100,000 tons each during the year, produced about 11 per cent of the output.

#### **4. The 1918 Costs and Sales Realizations Shown by Districts.**

There was no change in the official wage scale for bituminous coal miners in Indiana during 1918. Therefore the labor costs per ton for the period were principally affected by changes in the production tonnage and not by changes in the rate of wages paid labor. The effect of decreased production in increasing labor costs can be clearly seen on Diagrams XI and XII (opposite p. 126) and Charts 12 and 13 (opposite p. 128).

Tables 61 to 70 in the appendix to this report (see pp. 264-278) show the costs and the sales realizations arranged from low to high in 1-cent groupings for each period shown. Throughout the tables for a given district the costs are shown for the same operators, but the costs of any given operator do not necessarily hold the same relative position in the 1-cent groups at each period. The shift of any operator in his relative position, from period to period, is generally slight.

The tables show, for each quarter and for the year as a whole, by 1-cent groupings, the tonnage produced at that cost, its per cent of the total production, the place of the group in the accumulated percentage, and the number of operators whose costs fell within each 1-cent group.

A summary of the significant facts brought out in Appendix Tables 61 to 70 appears in the following tables, in which are compared the true average cost, the range in cost of 90 per cent of the output which had the lowest costs and sales realizations, and the extreme range for the entire output of the 102 operators:



TABLE 68.—1918 quarterly and yearly "Revised" costs and sales realizations for 92 operators in District No. 1 of the State of Indiana, showing averages and range for 90 per cent and for 100 per cent of total output.

Period.	Cost per net ton.										Sales realization per net ton.				
	Labor.			Supplies.			General expense.			Total f. o. b. mine.					
	Range.		Aver- age.	Range.		Aver- age.	Range.		Aver- age.	Range.					
	90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.							
										90 per cent output.			100 per cent output.		
\$1.41	\$0.75-1.69	\$0.20	\$0.00-0.27	\$0.00-1.34	\$0.23	\$0.02-0.29	\$0.02-2.85	\$1.83	\$1.23-2.17		\$1.23-5.09	\$2.38		\$1.52-2.59	90 per cent output.
January-March 1918.....	1.39	.86-1.62	.20	.00-.28	.00-.66	.23	.06-.33	.06-1.83	1.82	1.85-2.10	1.35-4.86	2.35	1.57-2.47	90 per cent output.	100 per cent output.
April-June, 1918.....	1.41	.88-1.60	.19	.00-.29	.00-.71	.23	.06-.32	.06-1.83	1.83	1.33-2.15	1.33-3.04	2.31	1.85-2.40	90 per cent output.	100 per cent output.
July-September, 1918.....	1.41	.88-1.60	.19	.00-.29	.00-.71	.23	.06-.32	.06-1.83	1.83	1.33-2.15	1.33-3.04	2.31	1.85-2.40	90 per cent output.	100 per cent output.
October-December, 1918.....	1.47	.93-1.74	.24	.00-.34	.00-.61	.20	.13-.34	.13-.73	1.97	1.84-2.29	1.34-3.10	2.28	1.44-2.39	90 per cent output.	100 per cent output.
Year 1918.....	1.42	.90-1.70	.21	.00-.28	.00-.54	.23	.08-.29	.08-.78	1.86	1.34-2.17	1.34-3.16	2.33	1.56-2.44	90 per cent output.	100 per cent output.

TABLE 69.—1918 quarterly and yearly "Revised" costs and sales realizations for 10 operators in District No. 2 of the State of Indiana, showing averages and range for 90 per cent and for 100 per cent of total output.

Period.	Cost per net ton.										Sales realization per net ton.			
	Labor.			Supplies.			General expense.			Total f. o. b. mine.				
	Aver- age.	Range.		Aver- age.	Range.		Aver- age.	Range.		Aver- age.		Range.		
		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.		90 per cent output.	100 per cent output.			90 per cent output.	100 per cent output.	
January-March, 1918.	1.79	\$1.00-2.33	\$0.27	\$0.14-0.40	\$0.14-0.51	\$0.40	\$0.24-0.62	\$0.24-0.86	\$2.46	\$1.66-3.13	\$1.60-3.43	\$3.06	\$2.56-3.36	\$2.56-3.38
April-June, 1918.	1.74	.86-2.27	.20	.06-.30	.06-.33	.41	.25-.76	.25-.76	2.35	1.86-2.94	1.39-3.21	3.04	2.42-3.39	2.42-3.42
July-September, 1918.	1.89	1.04-2.31	.26	.12-.49	.12-.49	.41	.24-.70	.24-.70	2.66	1.72-3.16	1.72-3.16	3.13	2.40-3.46	2.40-3.46
October-December, 1918.	2.11	1.62-2.35	.39	.10-.65	.10-.66	.53	.27-.69	.27-.78	3.03	2.26-3.42	2.26-3.42	3.09	2.55-3.47	2.55-3.48
Year 1918.	1.87	1.17-2.31	.27	.14-.43	.14-.43	.43	.25-.64	.25-.68	2.57	1.80-3.00	1.80-3.45	3.08	2.57-3.38	2.57-3.43

**DIAGRAM XI.**

**DISTRICT NO. 1**

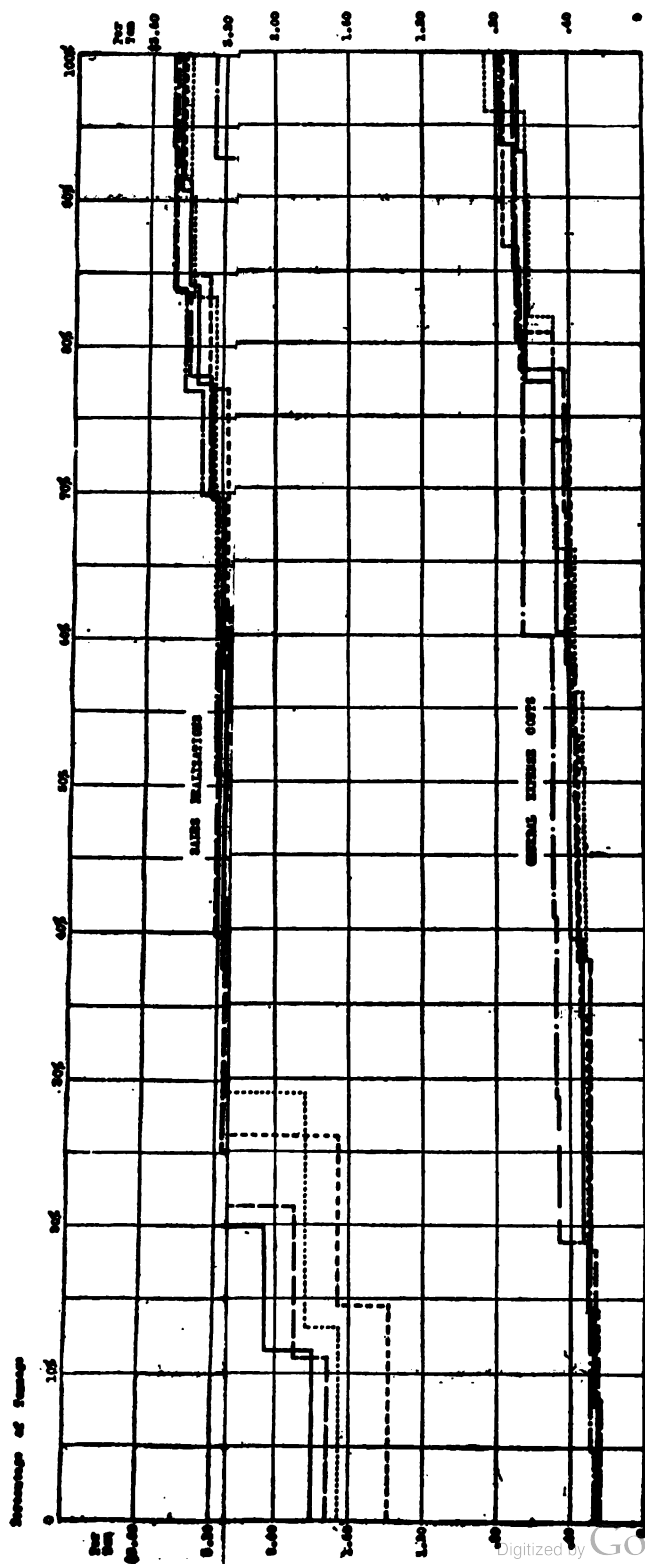


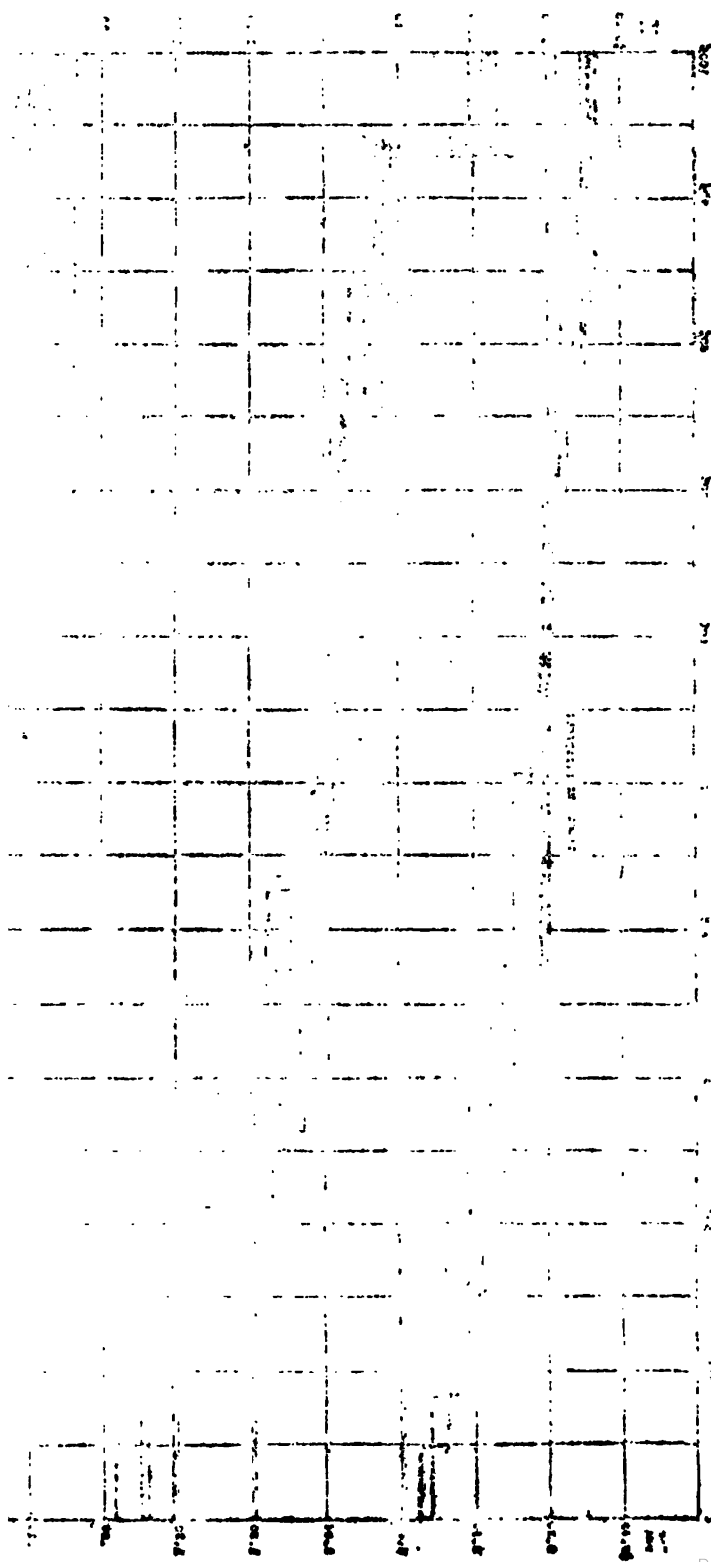
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# BITUMINOUS COAL — INDIANA

DIAGRAM XII.

BRAZIL BLOCK DISTRICT





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The following table of yearly averages is given for the sake of ready comparison of the two districts.

TABLE 70.—Average costs and sales realizations of two Indiana districts for the year 1918.

District.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton.
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
No. 1.....	Tons. 25, 179, 012	\$1. 42	\$0. 21	\$0. 23	\$1. 86	\$2. 33	\$0. 47
Brazil-Block.....	653, 739	1. 87	. 27	. 43	2. 57	3. 08	. 51

The labor cost for the Brazil-Block District was much higher than that for District No. 1. This is due, in a large degree, to the difference in the thickness of seam mined, and to some extent also is attributable to differences in the mining methods followed. As will be noted from the tabulation of thickness of seam (see Table 73, p. 130), 73 per cent of the output of the Brazil-Block District came from seams which averaged less than 4 feet thick, while the proportion of output from such seams was but 5 per cent in District No. 1.

Detailed statistics are not available to show how far these differences are attributable to the greater use of machines in mining coal in one district as compared with another. The proportion of the total production mined by machines is stated by the United States Geological Survey to have been 54.1 per cent in 1917, for the State as a whole.<sup>1</sup>

##### 5. Relation of Costs to Sales Realizations.

The following table shows the distribution, by quarters and for the year 1918, between the items of labor, supplies, general expense, and margin of each dollar of sales realization received by the operator.

TABLE 71.—Distribution of the amount paid by the purchaser between the principal costs and the margin, based on each dollar of sales realization, for the two districts in Indiana, 1918, by quarters and for the year.

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
District No. 1:					
January-March, 1918.....	Cents. 50	Cents. 9	Cents. 9	Cents. 77	Cents. 23
April-June, 1918.....	50	8	10	77	23
July-September, 1918.....	61	8	10	79	21
October-December, 1918.....	64	11	11	86	14
Year.....	61	9	10	80	20
Brazil-Block District:					
January-March, 1918.....	58	9	13	80	20
April-June, 1918.....	57	7	13	77	23
July-September, 1918.....	61	8	13	82	19
October-December, 1918.....	68	13	17	98	2
Year.....	60	9	14	83	17

<sup>1</sup> Mineral Resources of the United States, 1917. Part II, p. 941.

These facts are shown in graphic form in Chart 14 (opposite).

### 6. Comparison of "Claimed" and "Revised" Costs.

The foregoing tables present costs which have in some cases been "Revised" by the accountants of the Commission, from "Claimed" figures reported on the original schedules by the operators. Tables 71 and 72 in the appendix to this report (see pp. 279-282) show the "Claimed" 1918 costs, compiled in all cases directly from the figures submitted by the operators.

The changes brought about through the revision in the average costs for the year 1918 for the 102 operators are as follows:

Items.	"Claimed" costs.	"Revised" costs.	Increase (+) or decrease (-) due to revision.
District No. 1:			
Production..... tons..	25,753,948	25,179,012	<sup>1</sup> - 574,936
Labor..... per ton..	\$1.39	\$1.42	+ \$0.03
Supplies..... do..	.25	.21	- .04
General expense..... do..	.27	.23	- .04
Total f. o. b. mine..... do..	1.91	1.86	- .05
Brazil-Block District:			
Production..... tons..	692,392	653,739	<sup>1</sup> - 38,653
Labor..... per ton..	\$1.76	\$1.87	+ \$0.11
Supplies..... do..	.40	.27	- .13
General expense..... do..	.51	.43	- .08
Total f. o. b. mine..... do..	2.67	2.57	- .10
State:			
Production..... tons..	26,446,340	25,632,751	<sup>1</sup> - 613,589
Labor..... per ton..	\$1.40	\$1.43	+ \$0.03
Supplies..... do..	.25	.21	- .04
General expense..... do..	.28	.24	- .04
Total f. o. b. mine..... do..	1.93	1.88	- .05

<sup>1</sup> Due to the exclusion of power-house fuel.

The increase of 3 cents per ton in the average "Revised" labor cost for the State over the "Claimed" is caused by the use of the "Revised" production tonnage as a divisor. The total "Claimed" labor cost was \$37,034,559 and the total "Revised" labor cost was \$36,972,639.

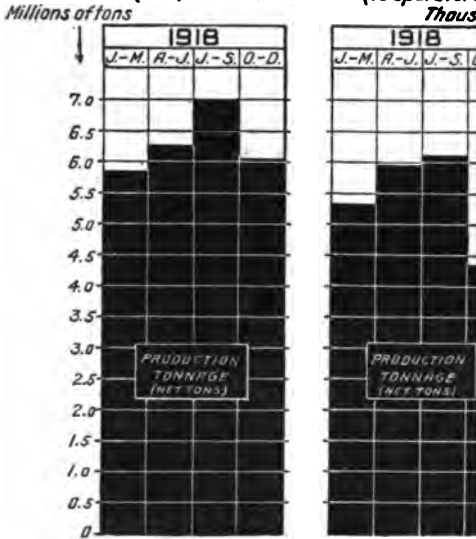
The costs claimed by a number of operators in Indiana were obviously open to question as to their accuracy. Such operators were required by the Commission to furnish detailed information in support of their "Claimed" costs. The examination of such detailed information revealed the fact that they had sometimes included such items as maintenance and contingent reserves. In most instances, the costs had been inflated principally through the inclusion of officers' salaries which were far in excess of those paid in neighboring operations of similar size, by excessive charges for the items of depletion and depreciation, which had not been computed in accordance with the rules prescribed in the instructions of the Commission, and in the inclusion of items under operating costs which properly should be classed as additions to capital.

# BITUMINOUS

**CHART 12** Production tonnage by quarter,  
year 1918 for 102 Operators by Produc.  
Districts in Indiana.

**A. District No. 1**  
(92 Operators)

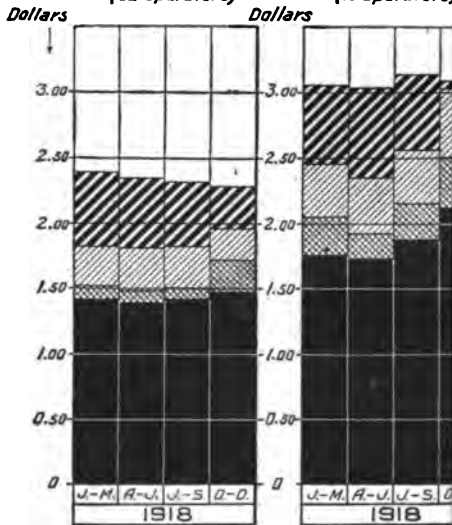
**B. Brazil Block L**  
(10 Operators)  
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**CHART 13** Average Costs and Sales Realization  
by quarters in 1918 for 102 Operators by Produc.  
Districts in Indiana.

**A. District No. 1**  
(92 Operators)

**B. Brazil Block L**  
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Under the heading of general expense, the chief instances affected 2 operators and involved less than 1 per cent of the total "Claimed" output for the year 1918 of the 102 operators.

### 7. 1918 Costs Shown by Thickness of Seam Mined.

About 55 per cent of the output of Indiana came from 28 producers who operated more than one mine. Most of these producers did not report the costs of each mine separately. In order to include them in a tabulation to show costs by thickness of seam, it was necessary to use the average of the seams mined by them. This has led to the inclusion of data in the tabulation for the 102 operators, which to a slight extent vitiates its scientific value, since it is not known whether equal tonnage was derived from mines which had seams above or below the average thickness. The tabulation by thickness of seam for the 102 operators follows:

TABLE 72.—*Seam tabulation of "Revised" costs for 102 operators in Indiana.*

Thickness of seam.	Number of operators.	Production, 1918.	Labor.	Supplies.	General expense.	Total f. o. b. mine.
<b>District No. 1:</b>		<i>Tons.</i>				
36 to 47 inches.....	6	1,331,549	\$1.43	\$0.19	\$0.28	\$1.90
48 to 59 inches.....	40	7,399,679	1.49	.18	.23	1.90
60 to 71 inches.....	28	11,532,036	1.42	.22	.23	1.87
72 to 83 inches.....	11	2,818,944	1.32	.22	.20	1.74
84 to 95 inches.....	6	1,982,288	1.28	.29	.25	1.82
96 to 107 inches.....	1	114,516	1.36	.21	.35	1.92
<b>Total.....</b>	<b>92</b>	<b>25,179,012</b>	<b>1.42</b>	<b>.21</b>	<b>.23</b>	<b>1.86</b>
<b>Brazil-Block District:</b>						
24 to 35 inches.....	2	164,104	1.84	.38	.55	2.77
36 to 47 inches.....	5	312,325	2.03	.21	.33	2.57
48 to 59 inches.....	3	177,310	1.61	.29	.49	2.39
<b>Total.....</b>	<b>10</b>	<b>653,739</b>	<b>1.87</b>	<b>.27</b>	<b>.43</b>	<b>2.57</b>
<b>State:</b>						
24 to 35 inches.....	2	164,104	1.83	.36	.55	2.74
36 to 47 inches.....	11	1,643,874	1.54	.20	.29	2.03
48 to 59 inches.....	43	7,576,989	1.50	.18	.24	1.92
60 to 71 inches.....	28	11,532,036	1.42	.22	.23	1.87
72 to 83 inches.....	11	2,818,944	1.32	.22	.20	1.74
84 to 95 inches.....	6	1,982,288	1.28	.29	.25	1.82
96 to 107 inches.....	1	114,516	1.36	.21	.35	1.92
<b>Total.....</b>	<b>102</b>	<b>25,832,751</b>	<b>1.43</b>	<b>.21</b>	<b>.24</b>	<b>1.88</b>

In order to eliminate the effect of the inclusion of average thicknesses, where producers operated two or more mines, a seam tabulation has been made of the 74 one-mine operators. It will be noted from the table following that the tonnage of the 74 one-mine operators was somewhat more regularly distributed among the different thicknesses of seam than was the case with the 102 operators:

TABLE 73.—*Distribution, between seams, of output of 102 operators and 74 one-mine operators in Indiana.*

Thickness of seam.	92 operators producing 25,179,012 tons in 1918.		66 operators producing 11,070,133 tons in 1918.	
	Number of operators.	Per cent of output.	Number of operators.	Per cent of output.
District No. 1:				
36 to 47 inches.....	6	5.2	3	3.7
48 to 59 inches.....	40	29.4	29	35.5
60 to 71 inches.....	28	45.8	20	27.9
72 to 83 inches.....	11	11.2	9	19.1
84 to 95 inches.....	6	7.9	4	12.8
96 to 107 inches.....	1	.5	1	1.0
Total.....	92	100.0	66	100.0
	10 operators producing 653,739 tons in 1918.		8 operators producing 462,808 tons in 1918.	
Brazil-Block District:				
24 to 35 inches.....	2	25.1	2	35.5
36 to 47 inches.....	5	47.8	4	38.5
48 to 59 inches.....	3	27.1	2	26.0
Total.....	10	100.0	8	100.0
	102 operators producing 25,832,751 tons in 1918.		74 operators producing 11,532,941 tons in 1918.	
State:				
24 to 35 inches.....	2	0.6	2	1.4
36 to 47 inches.....	11	6.4	7	5.1
48 to 59 inches.....	43	29.3	31	35.1
60 to 71 inches.....	28	44.6	20	26.8
72 to 83 inches.....	11	10.9	9	18.3
84 to 95 inches.....	6	7.7	4	12.3
96 to 107 inches.....	1	.5	1	1.0
Total.....	102	100.0	74	100.0

The tabulation of cost, by thickness of seam, for the 74 one-mine operators follows:

TABLE 74.—*Seam tabulation of "Revised" costs for 74 one-mine operators in Indiana.*

Thickness of seam.	Number of operators.	Production, 1918.	Labor.	Supplies.	General expense.	Total f. o. b. mine.
District No. 1:		Tons.				
36 to 47 inches.....	3	413,740	\$1.48	\$0.18	\$0.24	\$1.90
48 to 59 inches.....	29	3,928,163	1.49	.16	.24	1.89
60 to 71 inches.....	20	3,087,419	1.32	.18	.22	1.72
72 to 83 inches.....	9	2,113,776	1.32	.22	.22	1.76
84 to 95 inches.....	4	1,412,519	1.25	.26	.21	1.72
96 to 107 inches.....	1	114,516	1.36	.21	.35	1.92
Total.....	66	11,070,133	1.38	.19	.23	1.80
Brazil-Block District:						
24 to 35 inches.....	2	164,104	1.84	.38	.55	2.77
36 to 47 inches.....	4	178,189	1.98	.25	.33	2.56
48 to 59 inches.....	2	120,515	1.36	.30	.50	2.16
Total.....	8	462,808	1.77	.31	.45	2.53
State:						
24 to 35 inches.....	2	164,104	1.84	.38	.55	2.77
36 to 47 inches.....	7	591,929	1.63	.20	.27	2.10
48 to 59 inches.....	31	4,048,678	1.49	.16	.24	1.89
60 to 71 inches.....	20	3,087,419	1.32	.18	.22	1.72
72 to 83 inches.....	9	2,113,776	1.32	.22	.22	1.76
84 to 95 inches.....	4	1,412,519	1.25	.26	.21	1.72
96 to 107 inches.....	1	114,516	1.36	.21	.35	1.92
Total.....	74	11,532,941	1.40	.20	.23	1.83

A summary of the principal facts relating to labor, supplies, and total f. o. b. mine cost of the 74 one-mine operators, arranged in comparative form for District No. 1, Brazil-Block District, and for the State, is shown below:

Thickness of seam.	District No. 1.			Brazil-Block District.			State.		
	Labor.	Sup-plies.	Total f. o. b. mine cost.	Labor.	Sup-plies.	Total f. o. b. mine cost.	Labor.	Sup-plies.	Total f. o. b. mine cost.
24 to 35 inches.....				\$1.84	\$0.38	\$2.77	\$1.84	\$0.38	\$2.77
36 to 47 inches.....	\$1.48	\$0.18	\$1.90	1.98	.25	2.56	1.63	.20	2.10
48 to 59 inches.....	1.49	.16	1.89	1.36	.30	2.16	1.49	.16	1.89
60 to 71 inches.....	1.32	.18	1.72				1.32	.18	1.72
72 to 83 inches.....	1.32	.22	1.76				1.32	.22	1.76
84 to 95 inches.....	1.25	.26	1.72				1.25	.26	1.72
96 to 107 inches.....	1.36	.21	1.92				1.36	.21	1.92
Total.....	1.38	.19	1.80	1.77	.31	2.53	1.40	.20	1.83

In general, there is a decrease in the average labor cost per ton with the increase in the thickness of the seam, the chief exception being in the case of the seam 8 to 9 feet thick, which showed a labor cost in excess of seams from 5 to 8 feet thick. The correlation between size of seam and supplies cost is not as close as exists in the labor cost. In general, however, the cost of supplies increases as the thickness of seam increases.

Of the 92 operators in District No. 1, whose returns are included in the 1918 tabulations, 4 operators operated strip pits. (See p. 50 for a description of this method of mining.) A comparison of the costs of these operators with those of the remaining 88 who operated deep mines (shaft, slope, or drift) is shown in the following table:

Thickness of seam.	Strip pits.				Deep mines.			
	Number of operators.	Production, 1918.	Costs per ton.		Number of operators.	Production, 1918.	Costs per ton.	
			Labor.	Total, f. o. b. mine.			Labor.	Total, f. o. b. mine.
District No. 1:		Tons.				Tons.		
36 to 47 inches.....					6	1,331,549	\$1.43	\$1.90
48 to 59 inches.....	2	414,341	\$1.51	\$2.24	38	6,985,338	1.49	1.88
60 to 71 inches.....					28	11,532,036	1.42	1.87
72 inches and over.....	2	327,020	1.41	2.27	16	4,588,728	1.30	1.74
Total.....	4	741,361	1.47	2.25	88	24,437,651	1.41	1.85

General expense is less affected by conditions of a purely physical nature, like thickness of seam, but is closely connected with the commercial and financial economies of operation. The following

comparison of the costs of the 74 one-mine operators with those of the 28 operators of two or more mines is of interest:

TABLE 75.—Comparison of average "Revised" costs: Operators of one mine with operators of two or more mines in Indiana.

District.	Number of operators.	Number of mines.	Output, 1918.			Costs per ton.			
			Total output.	Output per operator.	Output per mine.	Labor.	Supplies.	General expenses.	Total f. o. b. mine.
No. 1:			<i>Tons.</i>	<i>Tons.</i>	<i>Tons.</i>				
1 mine.....	66	66	11,070,133	167,729	167,729	\$1.38	\$0.19	\$0.23	\$1.80
2 or more mines.....	26	87	14,108,879	642,649	162,171	1.45	.22	.24	1.91
Total.....	92	153	25,179,012	273,685	164,560	1.42	.21	.23	1.86
Brazil-Block:									
1 mine.....	8	8	462,808	57,851	57,851	1.77	.31	.45	2.53
2 or more mines.....	2	4	190,931	95,465	47,733	2.11	.20	.37	2.68
Total.....	10	12	653,739	65,374	54,478	1.87	.27	.43	2.57
State:									
1 mine.....	71	74	11,532,941	155,851	155,851	1.40	.20	.23	1.83
2 or more mines.....	28	91	14,299,810	510,708	157,141	1.46	.22	.21	1.92
Total.....	102	165	25,832,751	253,262	156,562	1.43	.21	.24	1.88

It will be noted that in District No. 1 and the State as a whole, the general expense (23 cents per ton) of the one-mine operators was slightly lower than that (24 cents per ton) of the operators of two or more mines. In the Brazil-Block District operators of two or more mines had a general expense 8 cents lower than the one-mine operators. District No. 1 forms an exception to the general rule, which is that the average general expense per ton of operators of two or more mines is less than that for the one-mine operators in the same district.

### Part III.—COMPARATIVE COSTS AND SALES REALIZATIONS FOR 1916, 1917, AND 1918.

The Commission has obtained for the years 1916 (wholly or in part), 1917, and 1918, the costs and sales realizations of 37 operators. They mined about 14,300,000 tons annually. All of the information for District No. 1, which deals with the period prior to August, 1917, was obtained by accountants of the Commission directly from the records of the operators. This information was obtained during the month of June and early in July, 1917, at the request of Gov. Goodrich of Indiana, and with his cooperation and that of the State board of accounts. At that time information for the months of June and July, 1917, was not available. All of the information for the Brazil-Block District prior to August, 1917, was filed by the operators on the Commission's cost forms, in support of petitions to the Fuel Administration for revision of prices fixed for that district. The information in both districts for August, 1917–December, 1918, was obtained from the operators' reports made to the Commission on its prescribed cost report forms.

#### 1. Representativeness of Statistics Presented.

In order that the costs and sales realizations of these 37 operators should be accepted as typical of the districts in which they mine, they must be shown to be of a fairly representative character. The following statement shows the proportion of the tonnage mined by these operators to the total commercial tonnage as derived from reports of the United States Geological Survey for 1916 and 1917, and the proportion mined by them to the total tonnage tabulated by the Commission for 1918:

District.	Number of operators.	Proportion of tonnage reported by U. S. Geological Survey.		Proportion of tonnage reported by Federal Trade Commission, 1918.
		1916	1917	
		<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
No. 1.....	33	41.3	50.6	65.0
Brazil-Block.....	4	62.7	77.3	44.2

In District No. 1 the 1916 figures for the 33 operators represent the last 9 months' tonnage only, and in 1917 they represent 10 months only, no information being available for June and July.

In respect to the quantity produced, the operators shown in the 1916–1918 tabulations in both districts produced a substantial pro-

portion of the total output, and in that respect can be considered representative.

The representativeness of the sales realizations in 1916 and 1917 of the 37 operators may be judged by comparison with the "average value per ton" figures derived for the districts from the Geological Survey reports for 1916 and 1917 by using value of tonnage "loaded at the mines for shipment" and "sold to local trade and used by employees":

District.	1916		1917	
	U. S. Geological Survey average value.	Federal Trade Commission sales realization.	U. S. Geological Survey average value.	Federal Trade Commission sales realization.
No. 1.....	\$1.27	\$1.32	\$2.00	\$2.00
Brazil-Block.....	1.71	2.10	2.21	2.96

As already pointed out, the 1916 figures for the 33 operators in District No. 1 cover only the last 9 months and are, therefore, not strictly comparable with the Survey figures.

A comparison of the average total f. o. b. mine costs and the average sales realizations of 86 operators in District No. 1 and the Brazil-Block District with those of the 37 operators during August-December, 1917, follows:

1917.	District No. 1.				Brazil-Block District.			
	Average total f. o. b. mine cost per ton.		Average sales realizations per ton.		Average total f. o. b. mine cost per ton.		Average sales realizations per ton.	
	78 operators.	33 operators.	78 operators.	33 operators.	8 operators.	4 operators.	8 operators.	4 operators.
August-October.....	\$1.44	\$1.44	\$2.00	\$2.05	\$2.19	\$2.10	\$2.80	\$2.96
November.....	1.69	1.69	2.43	2.37	2.71	2.62	3.03	3.25
December.....	1.75	1.77	2.43	2.38	2.75	2.59	3.05	3.26

The representativeness of the costs and sales realizations of the 37 operators in 1918 is shown by the comparisons in the following tables between their average figures and those of the 102 operators in the two districts who produced 25,832,751 tons in 1918:

TABLE 76.—Comparison of average "Revised" costs and sales realizations per ton for 1918 of 92 operators with 33 operators in District No. 1 of Indiana.

Item.	January-March.		April-June.		July-September.		October-December.		Year.	
	92 operators.	33 operators.	92 operators.	33 operators.	92 operators.	33 operators.	92 operators.	33 operators.	92 operators.	33 operators.
Labor.....per ton..	\$1.41	\$1.41	\$1.39	\$1.39	\$1.41	\$1.42	\$1.47	\$1.47	\$1.42	\$1.42
Supplies.....do....	.20	.20	.20	.20	.19	.20	.24	.25	.21	.21
General expense.....do....	.22	.20	.23	.22	.23	.21	.26	.23	.23	.22
Total f. o. b. mine cost.....do....	1.83	1.81	1.82	1.81	1.83	1.83	1.97	1.95	1.86	1.85
Sales realization.....do....	2.38	2.37	2.35	2.36	2.31	2.31	2.28	2.27	2.33	2.33

**TABLE 77.**—*Comparison of average "Revised" costs and sales realizations per ton for 1918 of 10 operators with 4 operators in the Brazil-Block District of Indiana.*

Item.	January-March.		April-June.		July-September.		October-December.		Year.	
	10 operators.	4 operators.	10 operators.	4 operators.	10 operators.	4 operators.	10 operators.	4 operators.	10 operators.	4 operators.
Labor.....per ton..	\$1.79	\$2.22	\$1.74	\$2.18	\$1.89	\$2.20	\$2.11	\$2.45	\$1.87	\$2.25
Supplies.....do.....	.27	.20	.20	.17	.28	.18	.39	.29	.27	.20
General expense.....do.....	.40	.30	.41	.29	.41	.29	.53	.42	.43	.32
Total f. o. b. mine cost...do.....	2.46	2.72	2.35	2.64	2.56	2.67	3.03	3.16	2.57	2.77
Sales realization.....do.....	3.06	3.21	3.04	3.27	3.13	3.30	3.09	3.32	3.08	3.27

The close correspondence shown between the averages of the 33 operators in District No. 1 with the averages of the 78 operators during August-December, 1917, and the 92 operators during 1918 shows that the figures for the 33 operators can be considered representative of the district. There is no such close correspondence shown, however, in the Brazil-Block District. The average total f. o. b. mine costs of the four operators were from 9 to 16 cents below those of the eight operators during August-December, 1917, and from 11 to 29 cents above those of the 10 operators during 1918. The average sales realizations of the four operators were from 6 to 22 cents above those of the eight operators during August-December, 1917, and from 15 to 23 cents above the 10 operators during 1918. The average margins of the four operators also differ considerably from those of the eight operators in 1917 and 10 operators in 1918. The foregoing analysis shows that conditions vary so greatly between the different operators in the Brazil-Block District that the combined averages for operators who produced 44 per cent of the output of the district in 1918 can be accepted as representative, only in a broad way, of the general fluctuations of the costs and sales realizations in the district.

## **2. The "Revised" Costs, Sales Realizations, and Production Figures and Analyses of the Fluctuations, by Districts, 1916-1918.**

The "Revised" costs and the sales realizations of the operators combined are shown in this section for different periods. The difference between the "Revised" and "Claimed" costs is so immaterial that only "Revised" costs are shown. In the upper division of Tables 80 and 83 are shown the costs and sales realizations for part or all of the year 1916, and for each month of 1917 and 1918. In the second division, these costs and sales realizations are shown for periods of varying length, which correspond to the duration of certain conditions which had great influence on the costs and the sales realizations. In the third division of the tables are shown the figures by calendar years.



In Table 78 the distribution of the total f.o.b. mine costs and sales realizations, and in Table 79 the amounts by which the f.o.b. mine costs exceeded or were exceeded by the sales realizations are shown for all or part of the year 1916 for District No. 1 and the Brazil-Block District.

TABLE 78.—*Distribution of total f. o. b. mine costs and sales realization per ton of 37 operators in District No. 1 and the Brazil-Block District of Indiana for part or all of 1916.*

\$0.10 groupings per ton.	District No. 1, April-December, 1916.		Brazil-Block District, year 1916.	
	Total f.o.b. mine cost.	Sales reali- zation.	Total f.o.b. mine cost.	Sales reali- zation.
	Per cent.	Per cent.	Per cent.	Per cent.
\$0.70-\$0.79.....	1.2			
.80-.89.....	5.6			
.90-.99.....	6.5	1.2		
1.00-1.09.....	36.3	9.3		
1.10-1.19.....	34.6	0.5		
1.20-1.29.....	11.6	33.0		
1.30-1.39.....	1.5	33.9		
1.40-1.49.....	2.7	4.4		
1.50-1.59.....		16.6		
1.60-1.69.....				
1.70-1.79.....				
1.80-1.89.....		1.1	25.0	
1.90-1.99.....			28.0	54.9
2.00-2.09.....			29.9	28.0
2.10-2.19.....				
2.20-2.29.....			17.1	
2.30-2.39.....				
2.40-2.49.....				
2.50-2.59.....				17.1
Total.....	100.0	100.0	100.0	100.0

TABLE 79.—*Distribution of the amounts per ton by which the total f. o. b. mine costs exceeded or were exceeded by the sales realizations of 37 operators in District No. 1 and the Brazil-Block District of Indiana for part or all of 1916.*

5-cent groupings per ton.	District No. 1, April- December, 1916.	Brazil Block- District, year 1916.
	Per cent.	Per cent.
Total f.o.b. mine costs exceeded sales realizations by:		
25 cents or more.....		
20-24 cents.....		
15-19 cents.....		
10-14 cents.....	1.6	
5-9 cents.....	0.5	
0-4 cents.....	1.1	29.9
	3.2	29.9
Sales realizations exceeded total f.o.b. mine costs by:		
0-4 cents.....	2.0	
5-9 cents.....	13.1	
10-14 cents.....	19.7	28.0
15-19 cents.....	3.5	25.0
20-24 cents.....	25.4	
25 cents or more.....	33.1	17.1
	96.8	70.1
Total.....	100.0	100.0

## DISTRICT NO. 1.

The significance of the nine periods selected for presenting the figures for 1916-1918 for District No. 1 is as follows:

*April-October, 1916.*—During this period the wage-scale agreement operating from April 1, 1916, was in effect. During the last two months of this period the demand for coal was beginning to strengthen and sales realizations to rise.

*November, 1916-March, 1917.*—During this period the demand for coal caused a high realization on that part of the output which was not sold under contract. The wage scale of April 1, 1916, continued in effect.

*April-May, 1917; and August, 1917.*—War was begun, and during these two periods the higher 1917 wage scale was in operation. The contracts for the sale of coal entered into were generally at much higher prices than previous contracts, while the "spot" market advanced very sharply. No information was obtained covering the months of June and July, 1917.

*September-October, 1917.*—This period directly followed the fixing, by Executive order of August 21, 1917, of maximum prices for bituminous coal not sold under contracts made prior to that date and the establishment of a Fuel Administration to regulate the fuel situation. The 1917 wage scale continued in operation during these two months.

*November, 1917-March, 1918.*—This period directly followed the increase in the maximum prices allowed by Executive order in consequence of the adoption of a new wage scale (1917-18), which was higher than that adopted earlier in 1917. Many of the contracts made prior to August 21, 1917, continued through this period.

*April, 1918.*—Beginning with April 1, 1918, practically the entire output of coal, whether sold under contract or not, was subject to the governmental maximum prices. The 1917-18 wage scale continued in operation.

*May, 1918.*—Effective May 1, 1918, an increase in maximum prices for this district was allowed by the Fuel Administration. Effective May 25, 1918, it ordered a reduction of 10 cents per ton in the then existing maximum prices.

*June-December, 1918.*—Throughout this period there were no changes in the maximum prices established May 25, 1918, and the 1917-18 wage scale continued in operation.

TABLE 80.—“Revised” costs and sales realizations of 33 operators mining about 14,000,000 tons annually in District No. 1 of Indiana, 1916–1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
1916.							
	<i>Tons.</i>						
April.....	399,001	\$9.99	\$0.11	\$0.23	\$1.33	\$1.17	\$0.16
May.....	711,266	.89	.08	.15	1.12	1.14	.02
June.....	886,486	.87	.07	.15	1.09	1.14	.05
July.....	746,342	.90	.09	.15	1.14	1.15	.01
August.....	820,002	.87	.08	.15	1.10	1.16	.06
September.....	980,956	.84	.07	.14	1.05	1.19	.14
October.....	1,063,178	.85	.08	.13	1.06	1.24	.18
November.....	1,125,286	.85	.10	.12	1.07	1.58	.51
December.....	1,312,047	.84	.09	.13	1.06	1.69	.63
1917.							
January.....	1,375,189	.84	.09	.11	1.04	1.75	.71
February.....	1,304,534	.86	.09	.12	1.07	1.79	.72
March.....	1,269,581	.88	.11	.12	1.11	1.63	.52
April.....	1,010,333	1.00	.12	.16	1.28	1.78	.50
May.....	1,179,259	1.05	.12	.15	1.32	1.97	.65
June.....							
July.....							
August.....	1,269,186	1.11	.14	.16	1.41	2.10	.69
September.....	1,258,275	1.14	.16	.16	1.46	2.03	.57
October.....	1,455,704	1.12	.16	.16	1.44	2.02	.58
November.....	1,497,133	1.35	.18	.16	1.69	2.37	.68
December.....	1,382,012	1.38	.21	.18	1.77	2.38	.61
1918.							
January.....	1,231,797	1.45	.18	.20	1.83	2.38	.55
February.....	1,328,667	1.39	.19	.20	1.78	2.86	.58
March.....	1,365,154	1.39	.24	.20	1.83	2.36	.53
April.....	1,296,718	1.39	.24	.21	1.84	2.40	.56
May.....	1,377,993	1.39	.18	.21	1.78	2.36	.58
June.....	1,500,801	1.38	.21	.23	1.82	2.33	.51
July.....	1,558,507	1.37	.18	.22	1.77	2.30	.53
August.....	1,530,497	1.42	.20	.21	1.83	2.31	.55
September.....	1,355,732	1.47	.20	.22	1.89	2.31	.42
October.....	1,561,394	1.43	.22	.20	1.85	2.29	.44
November.....	1,167,654	1.47	.26	.23	1.96	2.26	.30
December.....	1,107,200	1.50	.28	.20	2.07	2.23	.16
April-October, 1916.....	5,548,231	.88	.08	.15	1.11	1.18	.07
November, 1916-March, 1917.....	6,286,637	.86	.09	.12	1.07	1.69	.62
April-May, 1917.....	2,189,592	1.02	.12	.16	1.20	1.88	.58
August, 1917.....	1,269,186	1.11	.14	.16	1.41	2.10	.69
September-October, 1917.....	2,713,979	1.13	.16	.16	1.45	2.02	.57
November, 1917-March, 1918.....	6,804,663	1.39	.20	.19	1.78	2.37	.59
April, 1918.....	1,296,718	1.39	.24	.21	1.84	2.40	.56
May, 1918.....	1,377,993	1.39	.18	.21	1.78	2.36	.58
June-December, 1918.....	9,771,785	1.43	.22	.22	1.87	2.30	.43
Year 1917.....	12,901,206	1.08	.14	.15	1.37	2.00	.63
Year 1918.....	16,374,014	1.42	.21	.22	1.85	2.33	.48

<sup>1</sup> Amount by which the sales realization was less than the total f. o. b. mine cost.

The 1916 costs and sales realizations of 10 of the 33 operators shown in Table 80 were obtained by months for the entire year, and are shown in the following table:

TABLE 81.—“Revised” costs and sales realizations of 10 operators in District No. 1 of Indiana, by months, 1916.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
	<i>Tons.</i>						
January.....	377,271	\$0.80	\$0.05	\$0.10	\$0.95	\$1.12	\$0.17
February.....	398,169	.79	.06	.09	.94	1.12	.18
March.....	349,372	.81	.06	.11	.98	1.12	.14
April.....	140,404	.94	.09	.23	1.26	1.17	.09
May.....	201,710	.89	.08	.17	1.14	1.16	.02
June.....	255,716	.83	.06	.16	1.05	1.16	.11
July.....	201,170	.88	.09	.19	1.16	1.18	.02
August.....	248,269	.84	.09	.16	1.09	1.18	.09
September.....	320,666	.81	.08	.14	1.03	1.18	.15
October.....	391,916	.80	.07	.14	1.01	1.25	.24
November.....	346,747	.84	.09	.15	1.08	1.66	.58
December.....	398,389	.83	.09	.16	1.08	1.74	.66
Year.....	3,629,829	.83	.07	.14	1.04	1.27	.23

<sup>1</sup> Amount by which the sales realization was less than the total f. o. b. mine cost.

It will be noted that during the month of April, 1916, the total f. o. b. mine cost exceeded the sales realization, and also that the production dropped from 349,372 tons in March to 140,404 tons in April, while the total f. o. b. mine cost rose from \$0.98 per ton in March to \$1.26 in April. The falling off in production was chiefly due to a strike or suspension of work which occurred throughout April and part of May, and perhaps in some measure was due to the general slackening in demand at this season. The new wage scale which went into effect April 1, 1916, was an increase over that in effect the first three months of 1916. The labor costs per ton for the last three quarters of the year (under the new wage scale) averaged about 3 cents higher than those of the first quarter. The increased demand for coal, and the consequent rise in the prices of “spot” coal (coal sold on the market) caused the sales realization on the total output to rise rapidly during November and December, 1916.

In Table 80, costs and sales realizations for 33 operators are shown for April, 1916, to December, 1918. These facts appear in graphic form in Chart 15 (opposite p. 140).

As was pointed out in connection with the 1916 figures for the 10 operators shown in Table 81, the production during April, 1916, was abnormally low, because of a strike, and in that month the total f. o. b. mine cost exceeded the sales realization. For the period April–October, 1916, the total f. o. b. mine cost averaged \$1.11 per ton, the sales realization \$1.18, and the margin 7 cents per ton.

During the period November, 1916–March, 1917, the increased demand for coal sent up the “spot” market prices. The sales realizations show substantial increases. That for November was \$1.58 per ton, 34 cents higher than October. The sales realizations for

March, 1917 (\$1.63 per ton), was 16 cents lower than that for February. This was probably caused by the shipping out of a larger proportion of the output sold under contracts which expired March 31, 1917. For the period November, 1916–March, 1917, the average total f. o. b. mine cost was \$1.07 per ton, 4 cents lower than the average for April–October, 1916. The average monthly production had increased, being 1,257,327 tons per month as compared with 792,604 tons during the previous period. The average sales realization during November, 1916–March, 1917, was \$1.69 per ton (an increase of 51 cents), and the margin was 62 cents per ton (an increase of 55 cents).

A new wage scale, which was an increase over that of 1916, became effective on April 1, 1917. The average labor cost for April and May (\$1.02 per ton) was 16 cents higher than that for November, 1916–March, 1917. Not all of this increase, however, can be attributed to the new wage scale, since the average monthly production (1,094,796 tons) was lower than that of the preceding period (1,257,327 tons). The expiration on March 31, 1917, of most of the contracts made early in 1916 allowed the output to be sold from April on at much higher prices, whether “spot” or contract. The average sales realization for the period April–May, 1917, was \$1.88 per ton (an increase of 19 cents over that for November, 1916–March, 1917), and the average margin was 58 cents per ton (a decrease of 4 cents). As has already been pointed out, no information was collected for June and July, 1917. The August labor cost was \$1.11 per ton. The August production (1,269,186 tons) was slightly in excess of the average monthly production for November, 1916–March, 1917 (1,257,327 tons). It is probable that the increased labor cost in August over November, 1916–March, 1917, is due not only to the increased wage scale which went into effect April 1, 1917, but also in some measure to the payment by some of the operators of extra wages (sometimes known as “bonus”) above the union scale. During August, 1917, the total f. o. b. mine cost was \$1.41 per ton, the sales realization \$2.10, and the margin 69 cents.

On August 21, 1917, the Government first fixed prices under the Lever Act. The prices fixed by Executive order for the sale of coal not then under contract in this district on August 21, 1917, were as follows: run of mine, \$1.95; prepared sizes, \$2.20; slack, \$1.70. The average proportions which these three classes form of the total output, based on actual returns for all operators in this district who reported to the Federal Trade Commission during the period August–December, 1917, are as follows: run of mine, 36 per cent; prepared sizes, 43 per cent; slack, 21 per cent. If the entire output of the 33 operators had been sold at the prices established August 21, 1917, it would have brought them a sales realization of \$2.01 per ton, a sales realization which is 1 cent less than they *actually* received during September–

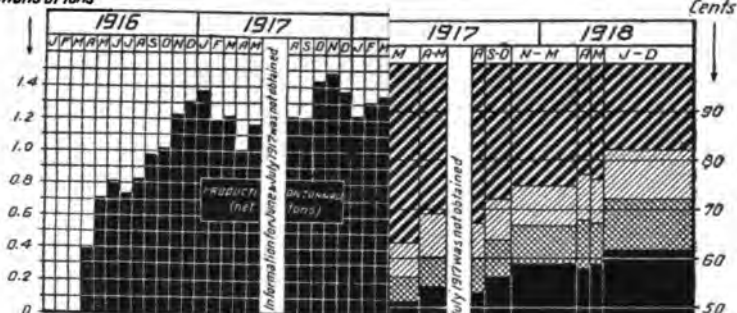
**CHART-15** Production, average Distribution of Amount paid by the Sales Realizations, Apr. 1916 - Dec. 1918 in the various principal Costs producing about 14,000,000 tons annually based on each dollar of Sales Realized in District No. 1, in Indiana.

**A. Production, monthly**

District No. 1

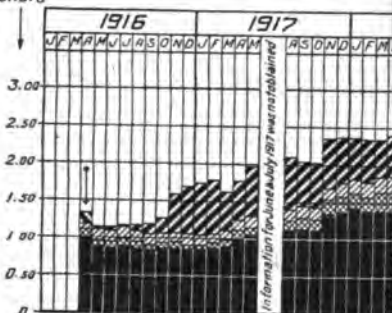
Millions of tons

Cents



**B. Average Costs and Sales Realization monthly.**

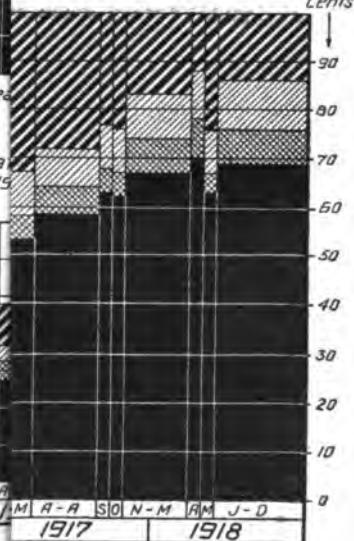
Dollars



• F.O.B. Mine Cost exceeded Sales Realization

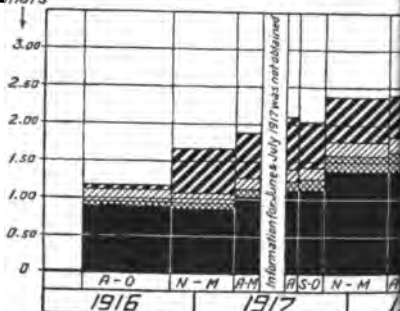
Oil Black District.

Cents



**C. Average Costs and Sales Realization specified periods, Apr. 1916 - Dec. 1918**

Dollars





October, 1917. The sales realization *actually* received in September, 1917, was \$2.03 per ton, and in October, \$2.02. The chief reason for this decline from the August realization was the establishment of the governmental maximum prices, the proportion of the output being sold by the 33 operators under relatively high priced contracts made prior to August 21, 1917, apparently not being as large as in some other districts.

The distribution of the total f. o. b. mine costs for 78 operators who mined 4,485,848 tons in District No. 1 during the three months of August–October, 1917, is shown in the following table:

TABLE 82.—*Total f. o. b. mine costs of 78 operators in District No. 1 of Indiana during August–October, 1917.*

Total f. o. b. mine costs per ton by \$0.10 groupings.	Number of operators.	Accumulated per cent of output.	Total f. o. b. mine costs per ton by \$0.10 groupings.	Number of operators.	Accumulated per cent of output.
\$0.90–\$0.99.....	1	0.1	\$1.90–\$1.99.....	4	97.4
1.00–1.09.....	2	1.2	2.00–2.09.....	3	98.9
1.10–1.19.....	2	6.3	2.10–2.19.....	1	99.3
1.20–1.29.....	9	26.7	2.20–2.29.....	2	99.8
1.30–1.39.....	10	39.5	2.30–2.39.....		
1.40–1.49.....	15	70.7	2.40–2.49.....	2	99.8
1.50–1.59.....	9	82.8	2.50–2.59.....		
1.60–1.69.....	8	90.2	2.60–2.69.....	1	100.0
1.70–1.79.....	7	95.1			
1.80–1.89.....	2	96.5			
			Total.....	78	100.0

The above table shows that had the operators sold their entire output at the prices fixed by the President on August 21, 1917, about 90 per cent of the output would have shown a margin of 25 cents or over per ton. The 78 operators received an *actual* average sales realization, during August–October, 1917, of \$2.09 per ton, which left them an average margin of 65 cents per ton over their average f. o. b. mine cost of \$1.44 per ton.

Effective November 1, 1917, a 45-cent increase in the price of noncontracted coal was allowed by Executive order to take care of an increase in the wage scale which went into effect at that time. The labor cost for the period November, 1917–March, 1918, of the 33 operators shown in Table 80 increased 26 cents per ton (from \$1.13 in September–October, 1917, to \$1.39 in November, 1917–March, 1918). The average monthly production remained practically constant (1,360,932 tons during November, 1917–March, 1918, as compared with 1,356,989 tons during September–October, 1917). The rise in the labor cost, therefore, probably reflects accurately the result of the increased wage scale. The average total f. o. b. mine cost for November, 1917–March, 1918, was \$1.78 per ton (an increase of 33 cents over the previous period) and the sales realization increased 35 cents, to \$2.37 per ton. The margin was 59 cents per ton, an increase of 2 cents. On April 1, 1918, practically the entire output of the district came under governmental regulation, most of the contracts entered into before August 21, 1917, having expired.



The average total f. o. b. mine cost in April was \$1.84 per ton, the sales realization \$2.40, and the margin 56 cents per ton. Effective May 1, 1918, the Fuel Administration increased the maximum prices established for this district. The new maximum prices (inclusive of the 45-cent price increase allowed November 1, 1917, for the wage increase) were: run of mine, \$2.45; prepared sizes, \$2.65; and slack, \$2.15. This made a possible realization, had the entire output been sold at the maximum prices, of \$2.47 per ton, a figure derived by using the already stated proportion of sizes for the district. The average total f. o. b. mine cost in May was \$1.78 per ton, the sales realization \$2.36, and the margin 58 cents per ton. Effective May 25, 1918, there was a reduction of 10 cents per ton made by the Fuel Administration in the existing maximum prices for the district. Throughout the period June–December, 1918, there was no change in the established maximum prices. The average monthly production was 1,395,969 tons, the highest for any period since April, 1916. It was highest in July, 1,558,507 tons. In October it was 1,551,394 tons. It fell to 1,167,654 tons in November, and 1,107,200 tons in December. The decline in production during these months is principally attributable to the influenza epidemic, and to the slackening in demand following the Armistice. As a result the total f. o. b. mine cost, which was \$1.85 per ton in October, rose to \$1.96 in November, and \$2.07 in December. The sales realization dropped from \$2.29 in October to \$2.26 in November, and \$2.23 in December, the margin for the three months being 44, 30, and 16 cents per ton, respectively. The average total f. o. b. mine cost for the 7-month period, June–December, 1918, was \$1.87 per ton, the sales realization \$2.30, and the margin 43 cents per ton.

#### BRAZIL-BLOCK DISTRICT.

The significance of the nine periods selected for presenting the figures for 1916–1918 for the Brazil-Block District is as follows:

*Year 1916.*—This period reflects the situation for the calendar year prior to the entrance of the United States into the war. Only the figures for 1916 as a whole were obtained for the Brazil-Block District.

*January–March, 1917.*—During this period the 1916 wage scale was still in operation, and much coal was being sold on contracts based on that wage scale. Most of these contracts expired on March 31. The imminence of war affected prices much more than costs.

*April–August, 1917.*—War was begun and during this period the higher 1917 wage scale was in operation. The contracts for the sale of coal entered into were generally at much higher prices than previous contracts, while the spot market advanced very sharply.

*September, 1917.*—This period directly follows the fixing, by Executive order of August 21, 1917, of maximum prices for bitu-

minous coal not sold under contracts made prior to that date, and the establishment of a Fuel Administration to regulate the fuel situation.

*October, 1917.*—This period directly followed the increase in maximum prices effective October 1, 1917, allowed this district by the Fuel Administration.

*November, 1917–March, 1918.*—This period directly followed the increase in the maximum prices allowed by Executive order in consequence of the adoption of a new wage scale (1917–1918), which was higher than that adopted earlier in 1917. Many of the contracts made prior to August 21, 1917, continued through this period.

*April, 1918.*—Beginning with April 1, 1918, practically the entire output of coal, whether sold under contract or not, was subject to the governmental maximum prices. The 1917–1918 wage scale continued in operation.

*May, 1918.*—Effective May 1, 1918, an increase in maximum prices for this district was allowed by the Fuel Administration. Effective May 25, 1918, it ordered a reduction of 10 cents per ton in the then existing maximum prices.

*June–December, 1918.*—Throughout this period there were no changes in the maximum prices established May 25, 1918, and the 1917–1918 wage scale continued in operation.

TABLE 83.—“Revised” costs and sales realizations of 4 operators mining about 300,000 tons annually in Brazil-Block District of Indiana, 1916–1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
1916.	<i>Tons.</i>						
Year.....	182,670	\$1.52	\$0.16	\$0.31	\$1.99	\$2.10	\$0.11
1917.							
January.....	32,365	1.45	.14	.21	1.80	2.85	1.05
February.....	29,113	1.45	.13	.23	1.81	2.98	1.17
March.....	24,226	1.57	.20	.26	2.03	2.51	.48
April.....	14,270	1.82	.18	.36	2.36	2.55	.19
May.....	25,821	1.72	.17	.26	2.15	2.98	.83
June.....	23,494	1.79	.21	.27	2.27	3.28	1.01
July.....	23,348	1.77	.18	.25	2.21	3.16	.95
August.....	25,045	1.69	.16	.22	2.07	3.05	.96
September.....	25,887	1.71	.14	.25	2.10	2.73	.63
October.....	28,016	1.72	.16	.24	2.12	2.90	.68
November.....	26,907	2.07	.28	.27	2.62	3.25	.63
December.....	26,889	2.13	.19	.27	2.59	3.26	.67
1918.							
January.....	24,990	2.28	.25	.30	2.83	3.24	.41
February.....	25,282	2.20	.23	.29	2.72	3.25	.43
March.....	26,125	2.18	.13	.29	2.60	3.13	.53
April.....	24,281	2.22	.26	.31	2.78	3.15	.37
May.....	26,591	2.13	.14	.29	2.56	3.37	.81
June.....	26,490	2.17	.13	.30	2.60	3.29	.69
July.....	27,518	2.18	.17	.29	2.64	3.31	.67
August.....	27,075	2.20	.24	.29	2.73	3.28	.55
September.....	23,802	2.23	.11	.30	2.64	3.30	.66
October.....	25,510	2.24	.23	.34	2.81	3.29	.48
November.....	18,129	2.43	.28	.42	3.13	3.32	.19
December.....	12,874	2.90	.39	.50	3.88	3.38	1.50

TABLE 83.—“Revised” costs and sales realizations of 4 operators mining about 300,000 tons annually in Brazil-Block District of Indiana, 1916-1918—Continued.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
	<i>Tons.</i>						
Year 1916.....	182,670	\$1.52	\$0.16	\$0.31	\$1.99	\$2.10	\$0.11
January-March, 1917.....	85,709	1.48	.15	.24	1.87	2.80	.92
April-August, 1917.....	114,978	1.75	.18	.27	2.20	3.04	.84
September, 1917.....	25,887	1.71	.14	.25	2.10	2.73	.63
October, 1917.....	28,016	1.72	.16	.24	2.12	2.80	.68
November, 1917-March, 1918..	130,202	2.17	.22	.28	2.67	3.23	.56
April, 1918.....	24,281	2.22	.25	.31	2.78	3.15	.37
May, 1918.....	26,591	2.13	.14	.29	2.56	3.37	.81
June-December, 1918.....	161,368	2.28	.21	.34	2.83	3.30	.47
Year 1916.....	182,670	1.52	.16	.21	1.89	2.10	.11
Year 1917.....	308,386	1.73	.18	.25	2.16	2.96	.80
Year 1918.....	288,646	2.25	.20	.32	2.77	3.27	.50

<sup>1</sup> Amount by which sales realization is less than total f. o. b. mine cost.

These facts are shown in graphic form in Chart 16 (opposite p. 140).

As has been already pointed out (see p. 135) the costs and sales realizations of the four operators shown in Table 83 can be taken as representative only of the general conditions and fluctuations, although not always closely typical of the remaining production of the Brazil-Block District. Costs and sales realizations for the four operators tabulated were not obtained by months for 1916, but merely figures for the calendar year. For the year 1916 the labor cost was \$1.52 per ton; the total f. o. b. mine cost, \$1.99; the sales realization, \$2.10; and the margin, 11 cents per ton.

From January, 1917, on, the Commission has figures compiled directly from the monthly reports of the operators. The first quarter of 1917 showed the effect of the increased demand for coal on the "spot" market, in a margin (93 cents per ton) much higher than the average for 1916. A part, however, of this increase in margin is probably due to the increase in production. During January-March, 1917, the average monthly production was 28,570 tons while during 1916 it was 15,222 tons. The average labor cost for January-March, 1917, was \$1.48 per ton (4 cents lower than for the year 1916) and the total f. o. b. mine cost was \$1.87 (12 cents lower). The average sales realization for the three-months period was \$2.80 per ton. It was \$2.85 for January and \$2.98 for February—then dropped to \$2.51 in March, the corresponding margins being \$1.05, \$1.17, and 48 cents per ton. The cause for this dropping off in sales realization seems to have been a suspension of demand. Brazil-Block coal is chiefly produced for domestic use, and buyers were apparently not only influenced by the approach of spring, which curtailed the demand for immediate use, but also by a hope that prices might be lower before the next winter's supply would be needed. The production,

which was 32,365 tons in January, fell to 29,118 tons in February and 24,226 tons in March.

A new wage scale, which was an increase over that of 1916, became effective on April 1, 1917. The labor cost for April was \$1.82 per ton, an increase of 25 cents per ton over that of March. While much of this labor cost increase is attributable to the new wage scale, some of it is due to lessened production, since the April output was but 14,270 tons. The average labor cost for the period April–August, 1917, was \$1.75 per ton, 27 cents higher than that for January–March, 1917; and the average monthly output (22,996 tons) was lower than that of the earlier period (28,570 tons). The sales realization in April was \$2.55 per ton, 4 cents higher than in March. In May, however, it was \$2.98 per ton (the same figure as in February, 1917). In June it reached \$3.28, the highest point during the period of April–August, 1917. It then began to drop, reaching \$3.05 in August. For the five-months period, the average total f. o. b. mine cost was \$2.20 per ton, the sales realization \$3.04, and the margin 84 cents per ton.

On August 21, 1917, the Government first fixed prices under the Lever Act. The prices fixed by Executive order for the sale of coal not then under contract in this district on August 21, 1917, were as follows: run of mine, \$1.95; prepared sizes, \$2.20; and slack, \$1.70. The average proportions which these three classes form of the total output, based on actual returns for all operators in this district who reported to the Federal Trade Commission during the period August–December, 1917, are as follows: run of mine, 1 per cent; prepared sizes, 83 per cent; slack, 16 per cent. If the entire output of the four operators had been sold at the prices established August 21, 1917, it would have brought them a sales realization of \$2.12 per ton, which is 61 cents less than the sales realization (\$2.73 per ton) which they *actually* received during September, 1917. Had they been obliged to sell their September product at \$2.12 per ton, their margin would have been 2 cents per ton. Their *actual* margin was 63 cents per ton during September. The fall in the sales realization from \$3.05 per ton in August to \$2.73 in September is in a large measure attributable to the fixing by the Government of maximum prices. While the maximum prices thus fixed on the “spot” or market coal would have returned practically no margin, had it been necessary for the operators to sell their entire product at that price, the practical effect was to lower the margin from 98 cents per ton to 63 cents per ton, which was over five times their average margin in 1916.

The distribution of the total f. o. b. mine costs for eight operators who mined 110,015 tons in the Brazil-Block District during the three months of August–October, 1917, is shown in the following table.

TABLE 84.—*Total f. o. b. mine costs of 8 operators in Brazil-Block District of Indiana during August-October, 1917.*

Total f. o. b. mine cost by \$0.10 groupings.	Number of operators.	Accumulated per cent of output.	Total f. o. b. mine cost by \$0.10 groupings.	Number of operators.	Accumulated per cent of output.
\$1.80-\$1.89.....	1	38.4	\$2.40-\$2.49.....	2	73.8
1.90- 1.99.....			2.50- 2.59.....	1	86.5
2.00- 2.09.....	2	56.4	2.60- 2.69.....		
2.10- 2.19.....			2.70- 2.79.....	2	100.0
2.20- 2.29.....			Total.....	8	100.0
2.30- 2.39.....					

This table shows that had it been necessary for the operators to sell their entire output at the prices fixed by the President on August 21, 1917, that only about half of the tonnage (56.4 per cent) would have received a sales realization which would cover the total f. o. b. mine cost. The 8 operators received an *actual* average sales realization, however, during these three months, of \$2.80 per ton, which left them an average margin of 61 cents per ton over their average f. o. b. mine cost of \$2.19 per ton.

Effective October 1, 1917, the Fuel Administration increased the maximum prices established for this district. The new maximum prices were: prepared sizes, \$2.95; slack, \$1.70. This made a possible realization, had the entire output (omitting the 1 per cent run of mine) been sold at the maximum prices of \$2.72 per ton, a figure derived by using the already stated proportion of sizes for the district. The *actual* sales realization of the 4 operators in Table 83 for October, 1917, was \$2.80 per ton, an increase of 7 cents over September. The total f. o. b. mine cost was \$2.12 per ton, an increase of 2 cents, and the margin 68 cents per ton, an increase of 5 cents.

Effective November 1, 1917, a 45-cent increase in the price of non-contracted coal was allowed by Executive order to take care of an increase in the wage scale which went into effect at that time. The average labor cost of the 4 operators for the period November, 1917-March, 1918, was \$2.17 per ton. Their average monthly production during the period was 26,040 tons, slightly higher than that of September (25,887 tons) and lower than that of October (28,016 tons). The increase in labor cost (about 45 cents per ton over these two months) is chiefly attributable to the increase in wages. The average total f. o. b. mine cost for November, 1917-March, 1918, was \$2.67 per ton, and the sales realization \$3.23, the margin being 56 cents per ton. On April 1, 1918, practically the entire output of the district came under governmental regulation, most of the contracts entered into before August 21, 1917, having expired. The average total f. o. b. mine cost in April was \$2.78 per ton, the sales realization \$3.15, and

the margin 37 cents per ton. The April production was 24,281 tons, a decrease from the average monthly production for the period November, 1917–March, 1918. Effective May 1, 1918, an increase in the maximum prices established for this district was allowed by the Fuel Administration. The new maximum prices (inclusive of the 45-cent price increase allowed Nov 1, 1917, because of the wage increase) were: run of mine, \$3.40; prepared sizes, \$3.70; slack, \$2.15. This made a possible realization, had the entire output been sold at the maximum prices, of \$3.45 per ton, a figure derived by using the already stated proportion of sizes for the district. The *actual* sales realization of the 4 operators for May, 1918, was \$3.37 per ton, an increase of 22 cents over April. The production was 26,591 tons, an increase over April. The labor cost was \$2.13 per ton, a decrease of 9 cents from April, and the total f. o. b. mine cost was \$2.56 per ton, a decrease of 22 cents. One-half of this decrease was in the item of supplies cost. The margin for May was 81 cents per ton, an increase of 44 cents over April. Effective May 25, a reduction of 10 cents per ton in the then existing maximum prices was ordered by the Fuel Administration. During the period June–December, 1918, there was no change in the maximum prices. The production of the 4 operators averaged 23,053 tons per month for the 7 months' period. It was highest in July (27,518 tons). In October it was 25,510 tons, in November 18,129 tons, and in December 12,874 tons. The falling off in the last two months is attributable principally to slackening of demand, following the Armistice, and to the influenza epidemic. As a result of this decrease in production, the labor cost of the four operators which in October was \$2.24 per ton, went to \$2.43 in November and \$2.90 in December. The total f. o. b. mine cost increased from \$2.81 per ton in October to \$3.13 in November and \$3.88 in December. The sales realization increased from \$3.29 in October to \$3.32 in November, and \$3.38 in December. The margin, which was 48 cents per ton in October, dropped to 19 cents in November, while in December the total f. o. b. mine cost of the four operators exceeded their sales realization by 50 cents per ton. For the entire period June–December, 1918, their average total f. o. b. mine cost was \$2.83 per ton, their sales realization \$3.30, and their margin 47 cents per ton.

### 3. Relation of the Cost Subdivisions to the Total f. o. b. Mine Costs.

The tables following, based on "Revised" costs, shows the distribution by specified periods between the items of labor, supplies, and general expense of each dollar in the total f. o. b. mine cost.

TABLE 85.—*Distribution between labor, supplies, and general expense of each dollar of total f. o. b. mine cost, 1916-1918, by specified periods and by calendar years for 33 operators producing about 14,000,000 tons annually in District No. 1 of Indiana.*

Period.	Labor.	Supplies.	General expense.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
April-October, 1916.....	79	7	14
November, 1916-March, 1917.....	80	9	11
April-May, 1917.....	78	9	13
August, 1917.....	79	10	11
September-October, 1917.....	78	11	11
November, 1917-March, 1918.....	78	11	11
April, 1918.....	76	13	11
May, 1918.....	78	10	12
June-December, 1918.....	76	12	12
Year 1917.....	79	10	11
Year 1918.....	77	11	12

TABLE 86.—*Distribution between labor, supplies, and general expense of each dollar of total f. o. b. mine cost, 1916-1918, by specified periods, and by calendar years for 4 operators producing about 300,000 tons annually in the Brazil-Block District of Indiana.*

Period.	Labor.	Supplies.	General expense.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
Year 1916.....	76	8	16
January-March, 1917.....	79	8	13
April-August, 1917.....	80	8	12
September, 1917.....	81	7	12
October, 1917.....	81	8	11
November, 1917-March, 1918.....	81	8	11
April, 1918.....	80	9	11
May, 1918.....	83	6	11
June-December, 1918.....	81	7	12
Year 1916.....	76	8	16
Year 1917.....	80	8	12
Year 1918.....	81	7	12

The foregoing tables show that while there was a slight variation from period to period, on the whole, the proportion of the labor cost to the total f. o. b. mine cost differed little throughout 1916-1918 in each district. It was generally higher in the Brazil-Block District than in District No. 1.

#### 4. Relative Increases in the Various Costs, 1916-1918.

In the following table are shown the relative increases in the various costs during 1917-1918 for the two districts, based on the costs for all or part of 1916:

TABLE 87.—*Relative increases in the various average costs, by districts, 1917-1918, as compared with specified periods in 1916 for 37 operators producing about 14,300,000 tons annually.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine cost.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
District No. 1:	<i>B.</i>	<i>B.</i>	<i>B.</i>	<i>B.</i>
April-October, 1916.....	12	11	20	14
November, 1916-March, 1917.....	15	50	7	17
April-May, 1917.....	26	75	7	27
August, 1917.....	28	100	7	31
September-October, 1917.....	58	150	27	61
November, 1917-March, 1918.....	58	200	40	66
April, 1918.....	58	125	40	61
May, 1918.....	62	175	47	68
June-December, 1918.....				

B = Base.

1 Decrease.

TABLE 87.—*Relative increases in the various average costs, by districts, 1917-1918, as compared with specified periods in 1916 for 57 operators producing about 14,300,000 tons annually—Continued.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine cost.
<b>Brazil-Block District:</b>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
Year 1916.....	B.	B.	B.	B.
January-March, 1917.....	13	16	122	16
April-August, 1917.....	15	13	113	10
September, 1917.....	12	113	119	6
October, 1917.....	13	0	122	7
November, 1917-March, 1918.....	43	38	110	34
April, 1918.....	46	56	0	40
May, 1918.....	40	113	16	29
June-December, 1918.....	50	31	10	42

B=Base.

1 Decrease.

The most significant increase was in the labor cost, which went up 62 per cent in District No. 1 and 50 per cent in the Brazil-Block District above that in 1916. The rates of increase in District No. 1 in the supplies cost, while much larger than those of the labor cost, had much less effect on the increase of the total f. o. b. mine cost, since as shown in Table 85, the supplies cost averaged from 7 to 13 per cent of the total f. o. b. mine cost, while the labor cost formed between 76 to 80 per cent.

### 5. Changes in the Relation of Costs to Sales Realizations.

The following table, based on the "Revised" costs and sales realizations shown in Tables 80 and 83 (see pp. 138 and 143), show the distribution for specified periods between the items of labor, supplies, general expense, and margin to operator of each dollar paid for coal to the operator by the purchaser:

TABLE 88.—*Distribution of the amount paid by the purchaser between the various principal costs and the margin, based on each dollar of sales realization, 1916-1918, by specified periods and by calendar years, for 33 operators producing about 14,000,000 tons annually in District No. 1 of Indiana.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
April-October, 1916.....	74	7	13	94	6
November, 1916-March, 1917.....	51	5	7	63	37
April-May, 1917.....	54	6	9	69	31
August, 1917.....	53	7	7	67	33
September-October, 1917.....	56	8	8	72	28
November, 1917-March, 1918.....	59	8	8	75	25
April, 1918.....	58	10	9	77	23
May, 1918.....	59	8	9	76	24
June-December, 1918.....	62	10	10	82	18
Year 1917.....	54	7	8	69	31
Year 1918.....	61	9	10	80	20



TABLE 89.—*Distribution of the amount paid by the purchaser between the various principal costs and the margin, based on each dollar of sales realization, 1916-1918, by specified periods and by calendar years, for 4 operators producing about 300,000 tons annually in the Brazil-Block district of Indiana.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
	Cents.	Cents.	Cents.	Cents.	Cents.
Year 1916.....	73	7	15	95	5
January-March, 1917.....	53	5	9	67	33
April-August, 1917.....	58	6	8	72	28
September, 1917.....	63	5	9	77	23
October, 1917.....	62	5	9	76	24
November, 1917-March, 1918.....	67	7	9	83	17
April, 1918.....	70	8	10	88	12
May, 1918.....	63	4	9	76	24
June-December, 1918.....	69	7	10	86	14
Year 1916.....	73	7	15	95	5
Year 1917.....	59	6	8	73	27
Year 1918.....	69	6	10	85	15

These facts are shown in graphic form in Chart 17 (opposite p. 140).

That part of the amount paid by the purchaser which went to labor varied greatly from period to period in each district. It was generally higher in the Brazil-Block District than in District No. 1. In District No. 1, it was highest (74 cents out of the dollar) for the period April-October, 1916, and lowest (51 cents out of the dollar) for November, 1916-March, 1917. In the Brazil-Block District it was highest (73 cents out of the dollar) for the period 1916 (year as a whole), and lowest (53 cents out of the dollar) for January-March, 1917.

The margin varied greatly from period to period in each district. The lowest margin for any period (5 cents out of the dollar) was for the year 1916 in the Brazil-Block District. The lowest in District No. 1 was that for April-October, 1916, being 6 cents out of the dollar. The highest margin (37 cents out of the dollar) for any period was for November, 1916-March, 1917, in District No. 1. The highest in the Brazil-Block District was 33 cents out of the dollar in January-March, 1917.

It must not, however, be supposed that such margins were all clear profit to the operators. As has been pointed out, the Commission's "Revised" cost figures exclude any charges for interest, income and excess profits taxes, donations, etc., which are expenditures that, while not entering into operating cost, must be met from the margin; nor is there any allowance in the total f. o. b. mine cost for the expense of selling the coal.

Of the 102 operators in Indiana whose costs were obtained for 1918, 64 reported a selling expense on their coal, and 38 did not report any. For those that did report, the "Claimed" selling expense varied from one-tenth cent per ton to 32 cents per ton, the average being 6 cents per ton.

It is fair to assume that a very large part of the output of the operators who reported no selling expense (forming 37 per cent of all operators reporting in Indiana) reached the consumer through the jobbers or sales agencies. Probably also a considerable fraction of the output of the remaining 63 per cent of the operators went through such channels.

That part of the output sold through jobbers is sold f. o. b. at the mine, and there is little or no selling expense to be considered, since it is taken care of in the sales realization, and would not come out of margin.

Considering the total investment as the amount necessary to operate the business, whether in the form of capital stock and surplus, bonds or other borrowed money, the return on the total investment in the business, after deducting the estimated average selling expense from the margin and before deducting interest on borrowed money or Federal income and excess profits taxes, is shown in the statement following for the years 1916, 1917, and 1918, for the 37 operators who produced about 14,300,000 tons annually:

	District No. 1.			Brazil-Block District.		
	April- Dec., 1916.	1917	1918	1916	1917	1918
Margin between f. o. b. mine cost and sales realization.	\$0.23	\$0.63	\$0.48	\$0.11	\$0.80	\$0.50
Estimated selling expense.....	.06	.06	.06	.06	.06	.06
Amount per ton earned on investment before deduct- ing interest on borrowed money and Federal income and excess profits taxes.....	.17	.57	.42	.05	.74	.44



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**CHAPTER IV.**

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**MICHIGAN.**

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# CHAPTER IV—MICHIGAN.

## Part I.—INTRODUCTION.

### 1. Definition of the District.

All operators in the State were considered as being in the same district. The Fuel Administration in its orders effective November 28, 1917, and August 16, 1918, established maximum prices for seven operators who were specified by name, and in the case of two of these operators, separate prices for the output of different mines operated by them. These seven operators produced about 99 per cent of the commercial output reported for 1918 by the United States Geological Survey.

The location of the coal fields is shown on the map of Michigan (opposite p. 156).

### 2. General Statistics of Output.

The following statistics, compiled from reports published by the United States Geological Survey, show the proportion which the output of Michigan has formed of the total bituminous coal output of the United States:

	Per cent.		Per cent.
1911.....	0.4	1915.....	0.3
1912.....	.3	1916.....	.2
1913.....	.3	1917.....	.2
1914.....	.3	1918.....	.3

The United States Geological Survey has collected information on the "average value per ton" for a long series of years. This average is obtained by dividing the total selling value by the total tonnage.<sup>1</sup> The following table shows this information for 1911–1918:

TABLE 90.—*Production and average value, 1911–1918, for the State of Michigan.*

Year.	Production.	Average value per ton.	Year.	Production.	Average value per ton.
	<i>Tons.</i>			<i>Tons.</i>	
1911.....	1,476,074	\$1.89	1915.....	1,156,138	\$2.05
1912.....	1,206,230	1.99	1916.....	1,180,360	2.25
1913.....	1,231,786	1.99	1917.....	1,374,805	3.22
1914.....	1,283,030	1.99	1918.....	1,464,818	3.83

<sup>1</sup> The value of coal given in this report is the realization value at the mine f. o. b. cars, and the average value per ton is the average realization price obtained by dividing the total value by the number of tons sold or produced. The coal used at the mine, the coal coked by the producing company, and the coal used in some other industry by the company operating the mine—an appreciable proportion of the whole—is never sold, and the value placed upon it is either an estimate or the figure at which it is carried on the books, either of which is supposedly based on what the coal would have brought if sold or what other fuel for the respective purpose would have cost if its purchase had been necessary. In other words, the values given represent returns to the operators for coal sold, plus estimated exchange value of that not sold. These figures do not necessarily show prices or even an average of the prices of coal at the mine. U. S. Geological Survey. (Mineral Resources of the U. S., 1917. Part II, p. 352.)

In its reports for 1916 and 1917 the United States Geological Survey published "average values" in more detail than in previous reports. The following table is compiled from statistics appearing in the 1916 and 1917 reports:

TABLE 91.—Disposition of product and average values, for the State of Michigan, 1916–1917.

	1916		1917	
	Production.	Average value per ton.	Production.	Average value per ton.
	<i>Tons.</i>		<i>Tons.</i>	
Loaded at mines for shipment.....	1,097,107	\$2.28	1,244,795	\$3.17
Sold to local trade and used by employees.....	51,770	2.98	52,045	4.18
Used at mines for steam and heat.....	51,483	1.81	47,965	2.99
Total.....	1,180,360	2.25	1,374,805	3.22

For a number of years the Michigan Department of Labor has published statistics of cost of production of the Michigan coal operations. The following tables have been compiled from the annual State reports for 1912–1918. In connection with the annual figures it should be noted that the fiscal year ends November 30.

TABLE 92.—Average annual costs per ton for Michigan coal mines, as reported by the State Department of Labor, 1912–1918.

Fiscal year ending November 30—	Number of mines reporting.	Total production. <sup>1</sup>	Average annual cost per ton.
		<i>Tons.</i>	
1912.....	16-25	1,271,481	\$1.72
1913.....	17-24	1,155,946	1.97
1914.....	16-23	1,164,632	2.01
1915.....	13-20	1,056,393	1.81
1916.....	12-18	1,076,215	1.90
1917.....	15-23	1,393,280	2.27
1918.....	18-23	1,520,883	3.41

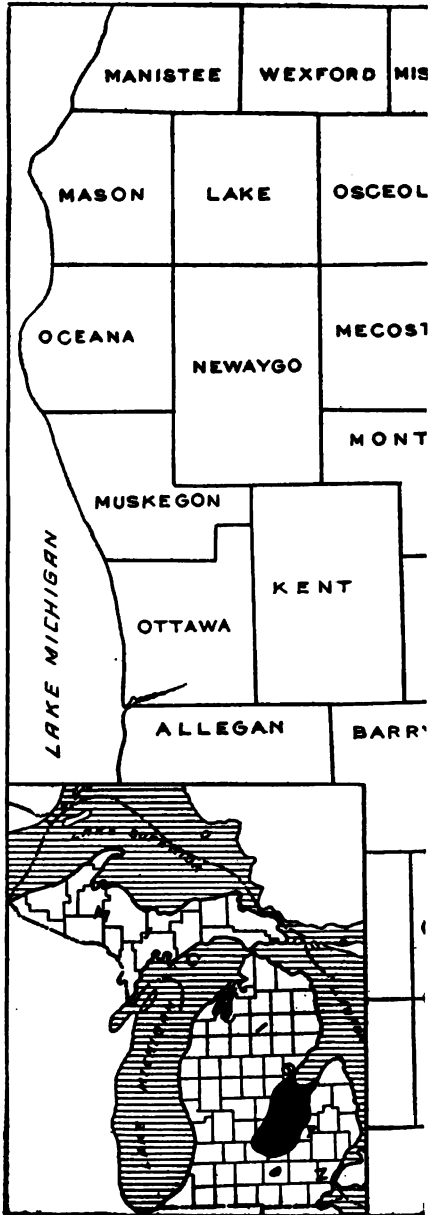
<sup>1</sup> Includes power-house fuel.

TABLE 93.—Average monthly costs per ton for Michigan coal mines, as reported by the State Department of Labor.

Month.	Fiscal year ending November 30—							
	1912		1913		1914		1915	
	Production.	Average cost per ton.	Production.	Average cost per ton.	Production.	Average cost per ton.	Production.	Average cost per ton.
	<i>Tons.</i>		<i>Tons.</i>		<i>Tons.</i>		<i>Tons.</i>	
December.....	152,562	\$1.75	139,746	\$1.91	121,963	\$1.96	115,969	\$1.78
January.....	152,123	1.96	107,181	2.07	115,578	2.06	96,844	1.92
February.....	137,878	1.63	99,607	1.97	102,390	2.01	76,979	1.90
March.....	164,352	1.65	83,350	2.02	120,251	1.91	82,313	1.81
April.....	53,729	2.10	86,679	1.99	74,880	2.15	64,098	1.82
May.....	43,705	2.60	62,175	2.15	81,221	2.03	65,122	1.85
June.....	47,532	2.19	74,962	1.97	59,226	2.05	93,739	1.40
July.....	66,722	2.05	84,715	1.99	65,737	1.75	69,214	1.90
August.....	86,600	1.88	98,652	1.97	102,269	1.97	85,987	1.87
September.....	104,380	1.97	76,039	1.94	103,292	1.92	95,397	1.77
October.....	132,006	1.90	124,925	1.87	110,627	2.07	99,611	1.82
November.....	129,912	1.88	117,915	1.89	107,208	1.97	111,120	1.82

# BITUMI

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164733°—20. (To face page 156.)



# THE HISTORY OF THE JAMES OGDON

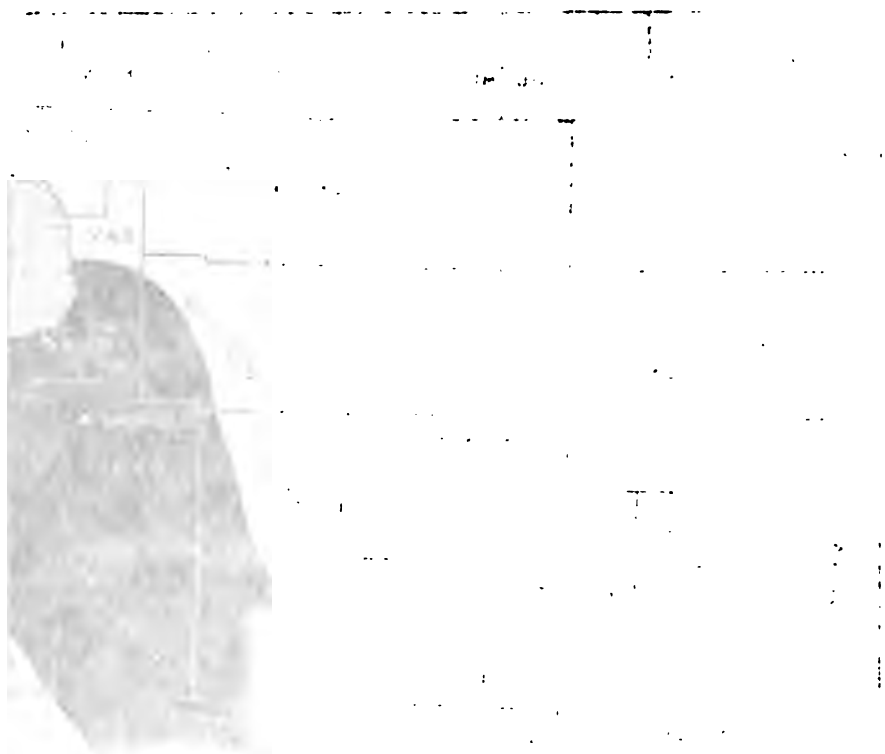


TABLE 93.—Average monthly costs per ton for Michigan coal mines, as reported by the State Department of Labor—Continued.

Month.	Fiscal year ending November 30—					
	1916		1917		1918	
	Production.	Average cost per ton.	Production.	Average cost per ton.	Production.	Average cost per ton.
	<i>Tons.</i>		<i>Tons.</i>		<i>Tons.</i>	
December.....	129,518	\$1.74	133,279	\$1.87	140,676	\$2.98
January.....	123,023	1.74	141,732	1.88	127,860	3.27
February.....	108,918	1.70	113,795	1.93	122,621	3.29
March.....	114,241	1.79	139,254	1.82	108,046	3.69
April.....	68,859	1.96	101,154	2.14	112,297	3.46
May.....	63,059	1.86	115,083	2.46	123,548	3.43
June.....	59,908	1.99	92,234	2.55	128,732	3.13
July.....	54,323	2.58	104,274	2.45	103,310	3.76
August.....	74,525	2.17	111,677	2.34	155,442	3.26
September.....	94,063	1.85	99,469	2.40	138,292	3.49
October.....	67,224	2.14	120,447	2.72	160,330	3.51
November.....	123,522	1.88	120,882	3.10	99,729	4.02

## Part II.—1918 COSTS AND SALES REALIZATIONS.

### 1. Number and Extent of Operations Covered.

Reports were received, covering the whole 12 months in 1918, from eight operators in Michigan. These were all the operators who were required to report. Their output in 1918 was 1,542,604 tons, *inclusive* of power-house fuel, and 1,417,387 tons, *exclusive* of power-house fuel. According to statistics issued by the United States Geological Survey, the output of Michigan during 1918 was 1,464,818 tons, of which 85,206 tons were used at the mine for steam and heat. The tonnage (inclusive of power-house fuel) reported to the Commission forms 105 per cent of similar tonnage reported by the Geological Survey, and 103 per cent of that reported by the Geological Survey, after the exclusion of mine fuel from the total.

### 2. Classification of Producers by Number of Mines Operated.

The costs of the eight operators shown in the tabulations for Michigan cover the output of 17 mines. The following table shows the number of mines operated by the different producers:

TABLE 94.—*Number of mines operated by different producers in Michigan.*

Number of mines run by each operator.	Number of operators.	Proportion of total number.	Production tonnage, 1918.	Proportion of total production.
		<i>Per cent.</i>	<i>Tons.</i>	<i>Per cent.</i>
1 mine.....	5	62.5	245,539	17.3
2 mines.....	1	12.5	138,129	9.7
4 mines.....	1	12.5	447,293	31.6
6 mines.....	1	12.5	586,426	41.4
Total (number of mines, 17).....	8	100.0	1,417,387	100.0

It will be seen that five producers operated only one mine each and produced 17.3 per cent of the output, and three producers operated two or more mines and produced 82.7 per cent of the output.

The average number of mines operated per producer was 2.1; the average annual production per mine operated by one-mine operators was 49,107 tons; by operators of two or more mines was 97,654 tons; and by all operators was 83,375 tons.

The number and size of mines in Michigan are shown in further detail in the report for 1917 of the United States Geological Survey from which the following statistics are derived.<sup>1</sup>

<sup>1</sup> Mineral Resources of the United States, 1917. Part II, pp. 947-948.

Annual output of mines.	Mines.		Tonnage.	
	Number.	Proportion of total in State.	Average production per mine. <sup>1</sup>	Proportion of total State output.
		<i>Per cent.</i>	<i>Tons.</i>	<i>Per cent.</i>
200,000 tons and over.....	7	31.8	128,294	65.3
100,000 to 199,999 tons.....	6	27.3	70,911	30.9
50,000 to 99,999 tons.....	2	9.1	11,798	1.7
10,000 to 49,999 tons.....	7	31.8	3,955	2.1
Under 10,000 tons.....				
State.....	22	100.0	62,491	100.0

<sup>1</sup> Including power-house fuel.

### 3. Classification of Producers by Size of Output.

The eight producers tabulated are classified by size of their output in 1918, exclusive of power-house fuel, as follows:

TABLE 95.—*Classification of eight Michigan operators by size of output.*

Production during 1918.	Number of operators.	Proportion of total number.	Tonnage produced 1918.	Proportion of total production.
		<i>Per cent.</i>	<i>Tons.</i>	<i>Per cent.</i>
Under 50,000 tons.....	3	37.5	97,067	6.9
50,000 to 99,999 tons.....	2	25.0	148,472	10.4
100,000 to 499,999 tons.....	2	25.0	585,422	41.3
500,000 to 999,999 tons.....	1	12.5	596,426	41.4
Total.....	8	100.0	1,417,387	100.0

### 4. The 1918 Costs and Sales Realizations.

There was no change in the official wage scale for bituminous coal miners in Michigan during 1918. Therefore, the labor costs per ton for the period were principally affected by changes in the production tonnage and not by changes in the rate of wages paid labor. The effect of decreased production in increasing labor costs can be clearly seen on Diagram XIII (opposite p. 160) and Charts 18 and 19 (opposite p. 162).

Tables 73 to 77 in the appendix to this report (see pp. 283-287) show the costs and the sales realizations arranged from low to high in 1-cent groupings for each period shown. Throughout the tables the costs are shown for the same operators, but the costs of any given operator do not necessarily hold the same relative position in the 1-cent groups at each period. The shift of any operator in his relative position, from period to period, is generally slight.

The tables show for each quarter and for the year, as a whole, by 1-cent groupings, the tonnage produced at that cost, its per cent of the total production, the place of the group in the accumulated percentage, and the number of operators whose costs fell within each 1-cent group.

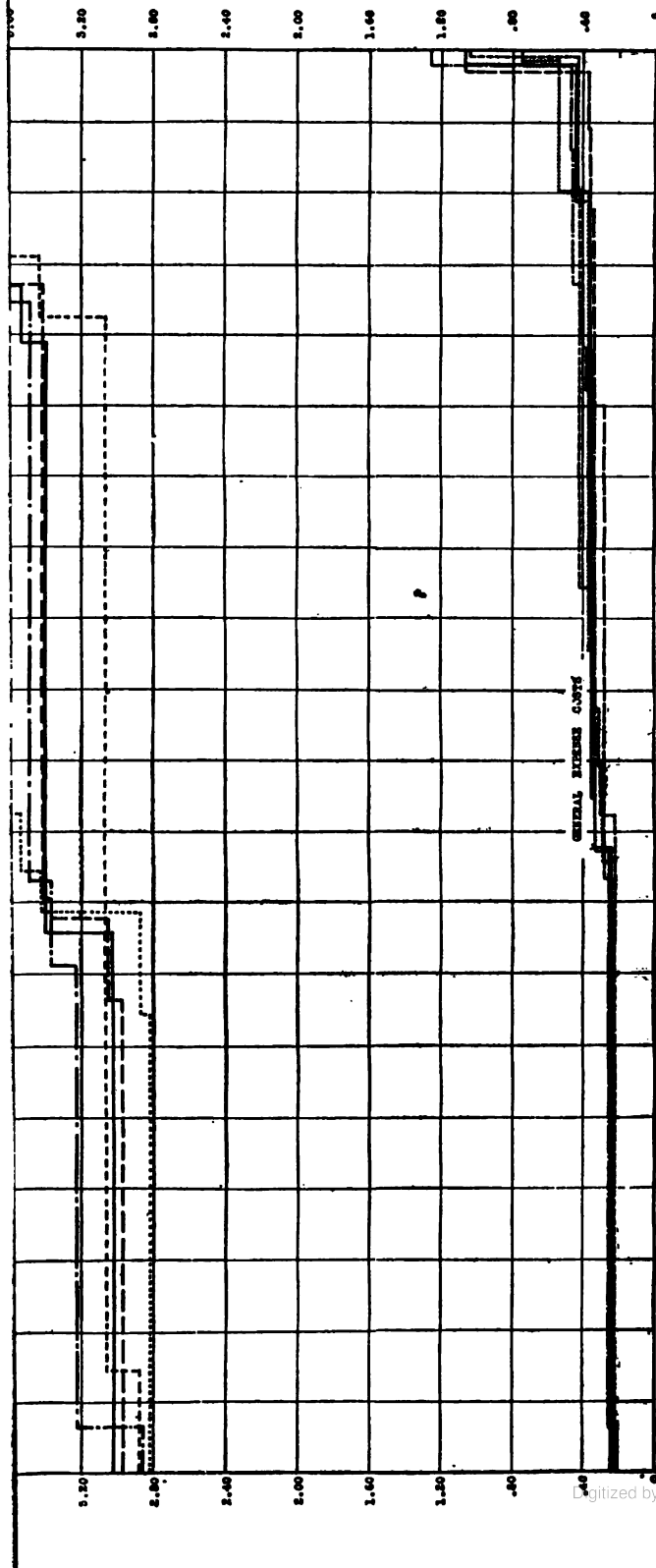
A summary of the significant facts brought out in Appendix Tables 73 to 77 appears in the following table, in which are compared the true average cost, the range in cost of 90 per cent of the output which had the lowest costs and sales realizations, and the extreme range for the entire output of the eight operators.

TABLE 96.—1918 quarterly and yearly "Revised" costs and sales realizations for eight operators in the State of Michigan, showing averages and range for 90 per cent and for 100 per cent of total output.

Period (1918).	Cost per net ton.										Sales realization per net ton.									
	Labor.					Supplies.					General expense.					Total f. o. b. mine.				
	Range.					Range.					Range.					Range.				
	Aver- age.	90 per cent output.	100 per cent output.	Aver- age.	90 per cent output.	100 per cent output.	Aver- age.	90 per cent output.	100 per cent output.	Aver- age.	90 per cent output.	100 per cent output.	Aver- age.	90 per cent output.	100 per cent output.	Aver- age.	90 per cent output.	100 per cent output.		
January-March.....	\$2.69	\$2.07-\$3.34	\$2.07-\$3.45	\$0.41	\$0.06-\$0.51	\$0.06-\$0.86	\$0.32	\$0.23-\$0.37	\$0.23-\$0.75	\$3.42	\$2.82-\$4.33	\$2.82-\$4.39	\$3.93	\$3.61-\$4.47	\$3.61-\$5.02					
April-June.....	2.42	1.69-3.25	1.93-4.58	.51	.12-.61	.12-1.35	.32	.22-.42	.22-1.04	3.25	2.88-4.25	2.88-5.01	4.02	3.85-4.18	3.85-6.00					
July-September.....	2.49	1.87-3.05	1.87-4.00	.58	.07-.77	.07-.78	.30	.22-.36	.22-1.07	3.37	2.97-3.99	2.97-5.12	4.09	3.95-4.24	3.95-5.19					
October-December..	2.62	2.36-3.54	2.36-4.26	.64	.06-.77	.06-.86	.33	.21-.46	.21-1.26	3.58	3.12-4.38	3.12-4.57	4.01	3.88-4.24	3.88-5.07					
Year.....	2.56	2.16-3.28	2.16-3.77	.54	.07-.64	.07-.65	.31	.24-.44	.24-1.07	3.41	3.02-4.35	3.02-4.75	4.02	3.83-4.28	3.83-5.21					

# BITUMINOUS COAL - MICHIGAN

DIAGRAM XIII.



164735°-20. (To face page 160.)



The proportion of pick mined output to the total output of the State has been decreasing for a number of years. This is illustrated by the following statistics for 1912-1918, taken from the annual report of the Michigan Department of Labor:

Fiscal year ending November 30—	Proportion of the total output.		Fiscal year ending November 30—	Proportion of the total output.	
	Pick mined.	Machine mined.		Pick mined.	Machine mined.
	<i>Per cent.</i>	<i>Per cent.</i>		<i>Per cent.</i>	<i>Per cent.</i>
1912.....	54	46	1916.....	17	83
1913.....	51	68	1917.....	14	86
1914.....	32	75	1918.....	11	89
1915.....	25	83			

### 5. Relation of Costs to Sales Realizations.

The following table shows the distribution, by quarters and for the year 1918, between the items of labor, supplies, general expense, and margin of each dollar of sales realization received by the operator:

TABLE 97.—*Distribution of the amount paid by the purchaser between the principal costs and the margin, based on each dollar of sales realization, for the State of Michigan, 1918, by quarters and for the year.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
January-March, 1918.....	69	10	8	87	13
April-June, 1918.....	60	13	8	81	19
July-September, 1918.....	61	14	7	82	18
October-December, 1918.....	66	16	8	90	10
Year.....	63	14	8	85	15

These facts are shown in graphic form in Chart 20 (opposite p. 162).

### 6. Comparison of "Claimed" and "Revised" Costs.

The foregoing tables present costs which have in some cases been "Revised" by the accountants of the Commission, from "Claimed" figures reported on the original schedules by the operators. Table 78 in the appendix to this report (see p. 288) shows the figures submitted by the operators.

The changes brought about through the revision in the average costs for the year 1918 for the eight operators are as follows:

Items.	"Claimed" costs.	"Revised" costs.	Increase (+) or decrease (—) due to revision.
Production..... tons..	1,542,604	1,417,387	125,217
Labor..... per ton..	\$2.35	\$2.56	+ \$0.21
Supplies..... do....	.69	.54	— .15
General expense..... do....	.54	.31	— .23
Total f. o. b. mine..... do....	\$3.58	\$3.41	— \$0.17

<sup>1</sup> Due to exclusion of power-house fuel.



The increase of 21 cents in the average "Revised" labor cost for the State of Michigan over the "Claimed" is caused by the use of the "Revised" production tonnage as a divisor. The total "Claimed" labor cost was \$3,625,898, and the total "Revised" labor cost was \$3,621,787.

The costs claimed by some operators were obviously open to question as to their accuracy. Such operators were required by the Commission to furnish further detailed information in support of their "Claimed" costs.

In some instances items were included under operating costs, either as labor or supplies, which should properly be classed as additions to capital.

Under the item of general expense the chief instances of revision affected only two of the eight operators shown for the entire State of Michigan. The nature of the inflations was principally in the item of officers' salaries and in greatly increased charges for depreciation and depletion, which had not been computed in accordance with the rules prescribed in the instructions of the Commission.

#### 7. 1918 Costs Shown by Thickness of Seam Mined.

In the following tabulation of costs by thickness of seam mined, for the eight operators, it was necessary to use the average thickness of the seams mined, in the case of three operators, who each worked two or more mines.

TABLE 98.—*Seam tabulation of "Revised" costs for eight operators in Michigan.*

Thickness of seam.	Number of operators.	Production, 1918.	Labor.	Supplies.	General expense.	Total f. o. b. mine.
		<i>Tons.</i>				
24 to 35 inches.....	4	321,835	\$2.95	\$0.51	\$0.38	\$3.74
36 to 47 inches.....	2	598,883	2.50	.65	.25	3.40
48 to 59 inches.....	2	496,669	2.42	.42	.35	3.19
Total.....	8	1,417,887	2.56	.54	.31	3.41

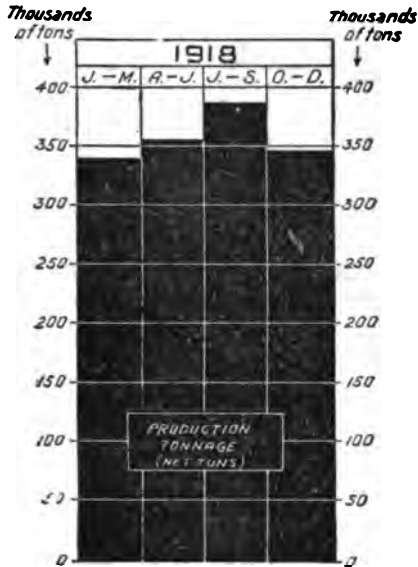
Since a separate tabulation for one-mine operators would make it possible to identify some of them with their individual costs, it has been omitted in the case of the Michigan operators.

It will be noted from Table 98, that there is a decrease in labor cost, as the thickness of seam increases.

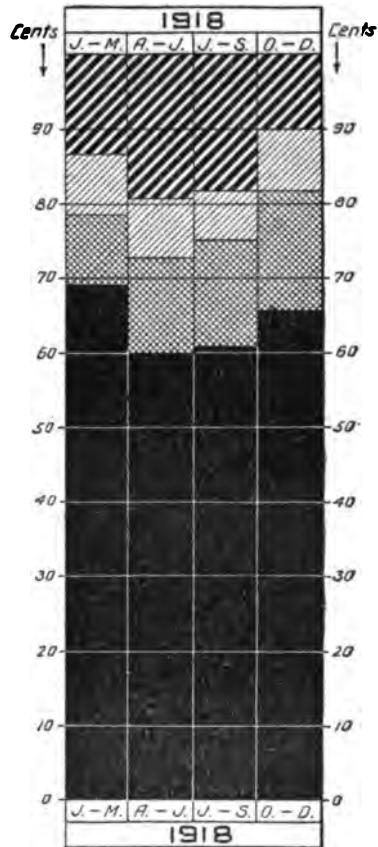
General expense is less affected by conditions of a purely physical nature, like thickness of seam, but is closely connected with the commercial and financial economies of operation. The following comparison of the costs of the five one-mine operators with those of the three operators of two or more mines is of interest:

# BITUMINOUS COAL — MICHIGAN

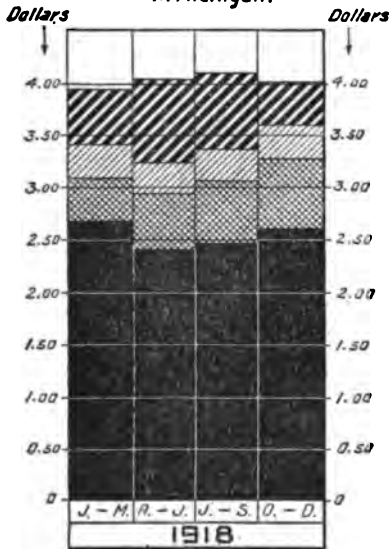
**CHART 18.** Production tonnage by quarters for the year 1918 for 8 operators in Michigan



**CHART 20.** Distribution of Amount paid by Purchaser between the various principal Costs and the Margin based on each Dollar of Sales Realization received by quarters in 1918, in Michigan.



**CHART 19.** Average Costs and Sales Realizations per ton by quarters for the year 1918 for 8 operators in Michigan.



Labor Supplies Gen'l Expns. Margin



**TABLE 99.**—*Comparison of average "Revised" costs: Operators of one mine with operators of two or more mines in Michigan.*

	Num-ber of oper-ators.	Num-ber of mines.	Output, 1918.			Costs per ton.			
			Total output.	Output per operator.	Output per mine.	Labor.	Sup-plies.	Gen-eral ex-pense.	Total f. o. b. mine.
1 mine.....	5	5	<i>Tons.</i> 245,539	<i>Tons.</i> 49,107	<i>Tons.</i> 49,107	\$2.76	\$0.48	\$0.37	\$3.61
2 or more mines.....	3	12	1,171,848	390,616	97,654	2.51	.55	.30	3.36
Total.....	8	17	1,417,387	177,173	83,375	2.56	.54	.31	3.41

It will be noted that the general expense of the operators of two or more mines was seven cents per ton lower than that of the one-mine operators.

### Part III.—COMPARATIVE COSTS AND SALES REALIZATIONS FOR 1916, 1917, AND 1918.

The Commission obtained for the last half of 1916 the costs and sales realizations of four operators, and for 1917 and 1918 those of seven operators, inclusive of the four just mentioned. The four operators mined about 1,200,000 tons annually and the seven operators about 1,350,000 tons. All of the information which deals with the period prior to August, 1917, was obtained by accountants of the Commission directly from the records of the operators. The information for August, 1917–December, 1918, was obtained from the operators' reports made to the Commission on its prescribed forms.

#### 1. Representativeness of Statistics Presented.

In order that the costs and sales realizations of the four and seven operators, respectively, should be accepted as typical for Michigan, they must be shown to be of a fairly representative character. The following statement shows the proportion of the tonnage mined by these operators to the total commercial tonnage as derived from reports of the United States Geological Survey for 1916 and 1917 and from the reports of the Michigan State Department of Labor for 1916 and 1917, and the proportion mined by them to the total tonnage tabulated by the Commission for 1918:

	Proportion of commercial tonnage reported by U. S. Geological Survey.		
	1916	1917	1918
4 operators.....	<i>Per cent.</i> 43.0	<i>Per cent.</i> 87.5	<i>Per cent.</i> 89.1
7 operators.....	.....	100.1	100.2

For 1916 the Commission obtained figures for the last six months only, and they are not strictly comparable with the Survey figures, which are for the whole year.

In respect to the quantity produced, both sets of operators produced a substantial proportion of the total output, and in that respect can be considered representative.

The representativeness of the sales realizations in 1916, 1917, and 1918 of the four operators and in 1917 and 1918 of the seven operators may be judged by comparison with the "average value per ton" figures derived for the State from the Geological Survey reports for

1916, 1917, and 1918 by using value of tonnage "loaded at the mines for shipment" and "sold to local trade and used by employees":<sup>1</sup>

	U. S. Geological Survey average value.	Federal Trade Commission sales realization.	
		4 operators.	7 operators.
1916.....	\$2.26	\$2.57	.....
1917.....	3.23	3.35	\$3.37
1918.....	13.83	3.96	3.99

As already pointed out, the 1916 figures for the four operators cover only the last six months and are therefore not strictly comparable with the Survey figures.

A comparison of the average costs per ton for all mines in Michigan, reported by the State Department of Labor, with the average costs for similar months of the four operators and the seven operators follows:

Date.	Michigan Department of Labor costs per ton.	Federal Trade Commission's total f. o. b. mine costs.	
		4 opera- tors.	7 opera- tors.
1916.			
July.....	\$2.58	\$2.29	.....
August.....	2.17	1.90	.....
September.....	1.85	2.12	.....
October.....	2.14	2.43	.....
November.....	1.88	1.99	.....
December.....	1.87	1.99	.....
1917.			
January.....	1.88	2.03	\$2.06
February.....	1.93	2.22	2.24
March.....	1.82	2.23	2.24
April.....	2.14	2.37	2.41
May.....	2.46	2.35	2.31
June.....	2.55	2.54	2.57
July.....	2.45	2.41	2.34
August.....	2.34	2.56	2.61
September.....	2.40	2.73	2.80
October.....	2.72	2.93	2.99
November.....	3.10	3.21	3.23
December.....	2.98	3.13	3.15
1918.			
January.....	3.27	3.27	3.25
February.....	3.29	3.37	3.37
March.....	3.69	3.64	3.69
April.....	3.46	3.26	3.28
May.....	3.43	3.24	3.24
June.....	3.13	3.16	3.17
July.....	3.76	3.54	3.58
August.....	3.26	3.16	3.19
September.....	3.49	3.31	3.37
October.....	3.51	3.37	3.39
November.....	4.02	3.96	4.00

The source of the cost figures reported by the Michigan Department of Labor, or the method used in arriving at the costs is not stated

<sup>1</sup> Value of coal "used at the mine for steam and heat" could not be separated for 1918.

in their reports. The correspondence between these costs and the "Revised" costs shown by the Commission is generally very close.

The foregoing comparisons of tonnage, costs, and sales realizations between the statistics for the total output derived from the United States Geological Survey and the Michigan Department of Labor reports, and those for the four and the seven operators respectively, show that the figures for the latter can be considered as representative.

## 2. The "Revised" Costs, Sales Realizations, and Production Figures, and Analyses of the Fluctuations, 1916-1918.

The "Revised" costs and sales realizations of the four operators combined are shown for different periods in Table 102 and those of the seven operators combined in Table 103. In the upper division are shown the costs and sales realizations for the last six months of 1916 (in Table 102), and for each month of 1917 and 1918 (in both tables). In the second division these costs and sales realizations are shown for periods of varying length, which correspond to the duration of certain conditions which had great influence on the costs and the sales realizations. In the third division of the tables are shown the figures by calendar years.

In Table 100 the distribution of the total f. o. b. mine costs and sales realizations, and in Table 101 the amounts by which the f. o. b. mine costs exceeded or were exceeded by the sales realizations are shown for the year 1916.

TABLE 100.—Distribution of total f. o. b. mine costs and sales realizations per ton of four operators in Michigan for the last half of 1916.

10-cent groupings per ton.	Total f. o. b. mine cost.	Sales realization.
	Per cent.	Per cent.
\$2.00-\$2.09.....	8.3	38.5
2.10- 2.19.....	91.7	
2.20- 2.29.....		
2.30- 2.39.....		
2.40- 2.49.....		55.3
2.50- 2.59.....		6.2
Total.....	100.0	100.0

TABLE 101.—Distribution of the amounts per ton by which the total f. o. b. mine costs exceeded or were exceeded by the sales realizations of four operators in Michigan for the last half of 1916.

5-cent groupings per ton.	Year 1916.
	Per cent.
Total f. o. b. mine cost exceeded sales realizations by:	
5-9 cents.....	38.5
0-4 cents.....	
Total.....	38.5
Sales realizations exceeded total f. o. b. mine cost by:	
0-4 cents.....	
5-9 cents.....	
10-14 cents.....	
15-19 cents.....	
20-24 cents.....	47.0
25 cents or more.....	14.5
Total.....	61.5
Grand total.....	100.0

The significance of the periods selected for presenting the figures for 1916-1918 is as follows:

*July-October, 1916.*—During this period the wage-scale agreement operating from April 1, 1916, was in effect. During the last month of this period the demand for coal was beginning to strengthen and sales realizations to rise.

*November, 1916-March, 1917.*—During this period the demand for coal caused a high realization on that part of the output which was not sold under contract. The wage scale of April 1, 1916, continued in effect.

*April-October, 1917.*—War was begun and during this period the higher 1917 wage scale was in operation. The contracts for the sale of coal entered into were generally at much higher prices than previous contracts, while the "spot" market advanced very sharply.

*November, 1917.*—This period followed the fixing by the Fuel Administration of the first governmental maximum prices, effective October 27, 1917, for the Michigan output, and also the 45-cent increase in maximum prices, effective November 1, 1917, allowed by Executive order in consequence of the adoption of a new wage scale (1917-18), which was higher than that adopted earlier in 1917.

*December, 1917-March, 1918.*—This period followed the increase in maximum prices effective November 30, 1917, allowed by the Fuel Administration. Many of the contracts made prior to October 27, 1917, continued through this period.

*April-May, 1918.*—Beginning with April 1, 1918, practically the entire output of coal, whether sold under contract or not, was subject to the governmental maximum prices. The 1917-18 wage scale continued in operation.

*June-August, 1918.*—This period followed the reduction, effective May 25, 1918, made by the Fuel Administration in the then existing maximum prices.

*September-December, 1918.*—This period followed the increase in maximum prices, effective August 16, 1918, made by the Fuel Administration. Throughout this period there was no change in maximum prices, and the 1917-18 wage scale continued in operation.

TABLE 102.—"Revised" costs and sales realizations of four operators mining about 1,200,000 tons annually in Michigan, 1916-1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
1916.	Tons.						
July.....	59,527	\$1.69	\$0.25	\$0.35	\$2.29	\$2.14	\$0.15
August.....	78,311	1.48	.20	.22	1.90	2.26	.36
September.....	79,799	1.62	.24	.26	2.12	2.25	.13
October.....	55,189	1.74	.34	.35	2.43	2.61	.18
November.....	106,874	1.54	.23	.22	1.99	2.90	.91
December.....	114,252	1.53	.22	.24	1.99	2.90	.91

<sup>1</sup> Amount by which the sales realization was less than the total f. o. b. mine cost.



TABLE 102.—“Revised” costs and sales realizations of four operators mining about 1,200,000 tons annually in Michigan, 1916–1918—Continued.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
1917.	<i>Tons.</i>						
January.....	120,721	\$1.51	\$0.24	\$0.28	\$2.03	\$3.10	\$1.07
February.....	95,154	1.65	.26	.31	2.22	3.14	.92
March.....	119,616	1.59	.28	.36	2.23	3.00	.77
April.....	85,862	1.32	.22	.33	2.37	3.01	.64
May.....	98,473	1.79	.24	.32	2.35	2.97	.62
June.....	81,055	1.93	.27	.34	2.54	3.20	.66
July.....	84,371	1.79	.28	.34	2.41	3.28	.87
August.....	90,910	1.85	.32	.39	2.56	3.41	.85
September.....	83,008	2.15	.19	.39	2.73	3.35	.62
October.....	93,833	2.34	.23	.36	2.93	3.90	.97
November.....	96,620	2.57	.25	.39	3.21	4.14	.93
December.....	112,193	2.50	.26	.37	3.13	4.15	1.02
1918.							
January.....	103,422	2.64	.32	.31	3.27	3.91	.64
February.....	94,836	2.68	.36	.33	3.37	3.86	.49
March.....	91,129	2.79	.52	.33	3.64	3.78	.14
April.....	92,860	2.50	.40	.36	3.26	3.99	.73
May.....	104,966	2.34	.60	.30	3.24	3.99	.75
June.....	111,184	2.32	.56	.28	3.16	3.97	.81
July.....	88,237	2.56	.65	.33	3.54	4.02	.48
August.....	132,441	2.33	.58	.25	3.16	4.04	.88
September.....	113,427	2.45	.60	.26	3.31	4.07	.76
October.....	128,209	2.42	.67	.28	3.37	3.93	.56
November.....	76,709	2.82	.76	.38	3.96	4.03	.07
December.....	92,048	2.59	.56	.31	3.46	3.92	.46
July–October, 1916.....	272,826	1.62	.25	.28	2.15	2.30	.15
November, 1916–March, 1917.....	556,617	1.56	.25	.28	2.09	2.00	.91
April–October, 1917.....	617,512	1.95	.25	.36	2.56	3.28	.72
November, 1917.....	96,650	2.57	.25	.39	3.21	4.14	.93
December, 1917–March, 1918.....	401,580	2.64	.36	.34	3.34	3.92	.58
April–May, 1918.....	197,826	2.42	.50	.28	3.25	2.99	.74
June–August, 1918.....	331,862	2.39	.59	.28	3.26	4.01	.75
September–December, 1918.....	410,393	2.54	.64	.30	3.48	3.99	.51
Year, 1917.....	1,161,826	1.95	.25	.35	2.55	3.35	.80
Year, 1918.....	1,229,468	2.52	.55	.31	3.38	3.96	.58

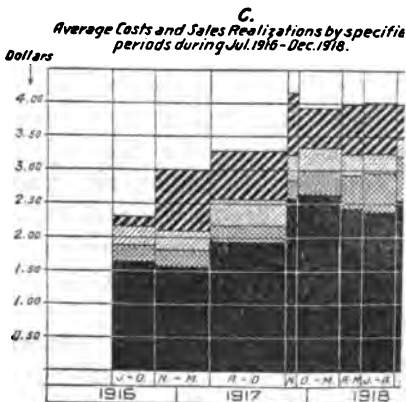
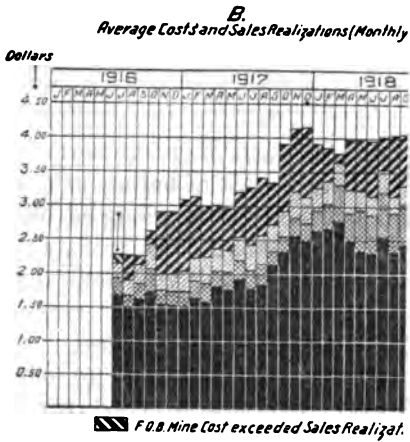
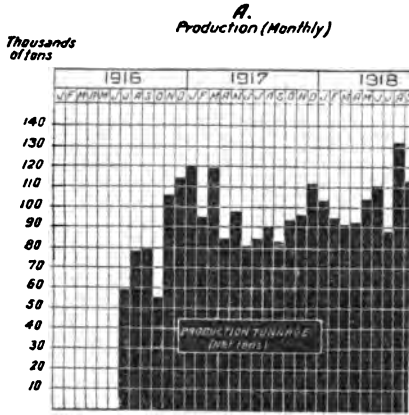
These facts in the first two divisions of the foregoing table are shown in graphic form in Chart 21 (opposite).

TABLE 103.—“Revised” costs and sales realizations of seven operators mining about 1,350,000 tons annually in Michigan, 1917–1918.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
1917.	<i>Tons.</i>						
January.....	137,010	\$1.54	\$0.25	\$0.27	\$2.06	\$3.16	\$1.10
February.....	108,844	1.66	.27	.31	2.24	3.21	.97
March.....	133,946	1.61	.27	.36	2.24	3.05	.81
April.....	95,191	1.84	.24	.33	2.41	3.03	.62
May.....	113,945	1.76	.22	.33	2.31	2.97	.66
June.....	92,314	1.94	.29	.34	2.57	3.28	.71
July.....	102,754	1.71	.29	.34	2.34	3.16	.82
August.....	103,319	1.90	.32	.39	2.61	3.45	.84
September.....	93,536	2.17	.22	.41	2.80	3.38	.58
October.....	106,928	2.36	.26	.37	2.99	3.87	.88
November.....	111,319	2.54	.27	.42	3.23	4.11	.88
December.....	128,607	2.49	.29	.37	3.15	4.12	.97

**B**

**CHART 21.** Production and average Costs and Sales Realizations, July 1916 to Dec. 1918 of Ope producing about 1,200,000 tons annually, in Mex



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TABLE 103.—“Revised” costs and sales realizations of seven operators mining about 1,350,000 tons annually in Michigan, 1917-1918—Continued.

Period.	Production.	Costs per ton.				Sales realization per ton.	Margin per ton (realization over f. o. b. mine cost).
		Labor.	Supplies.	General expense.	Total f. o. b. mine.		
1918.	Tons.						
January.....	118,840	\$2.61	\$0.33	\$0.31	\$3.25	\$3.95	\$0.70
February.....	109,086	2.66	.39	.32	3.37	3.90	.53
March.....	100,633	2.79	.66	.34	3.69	3.81	.12
April.....	106,663	2.51	.42	.35	3.28	4.00	.72
May.....	117,689	2.36	.67	.31	3.24	4.01	.77
June.....	124,522	2.34	.55	.28	3.17	3.99	.82
July.....	99,470	2.58	.64	.36	3.58	4.05	.47
August.....	147,351	2.36	.58	.25	3.19	4.04	.85
September.....	126,242	2.49	.60	.28	3.37	4.10	.73
October.....	144,533	2.46	.65	.28	3.39	3.96	.57
November.....	86,535	2.86	.74	.40	4.00	4.04	.04
December.....	101,354	2.65	.58	.36	3.59	3.94	.35
January-March, 1917.....	379,800	1.60	.27	.31	2.18	3.13	.95
April-October, 1917.....	707,987	1.95	.26	.36	2.57	3.27	.70
November, 1917.....	111,319	2.54	.27	.42	3.23	4.11	.88
December, 1917-March, 1918.....	457,266	2.63	.38	.34	3.35	3.95	.60
April-May, 1918.....	223,352	2.43	.50	.33	3.26	4.00	.74
June-August, 1918.....	371,373	2.41	.58	.30	3.29	4.03	.74
September-December, 1918.....	458,769	2.58	.64	.32	3.54	4.01	.47
Year, 1917.....	1,327,713	1.95	.27	.35	2.57	3.37	.80
Year, 1918.....	1,382,153	2.54	.55	.31	3.40	3.99	.59

Before entering into any discussion of the causes of the changes from period to period in the costs shown in Tables 102 and 103, attention should be given to the marked fluctuations in the monthly output. That such marked fluctuations have been common for several years past is shown by the statistics of monthly production reported by the Michigan State Department of Labor (see p. 156). How far these fluctuations are due to changes in the demand, and how far they are caused by mining conditions peculiar to the Michigan operations, has not been determined. The effect, however, of such violent fluctuations in the monthly output is to produce marked fluctuations in the average monthly costs.

During July-October, 1916, for the four operators shown in Table 102, the average labor cost was \$1.62 per ton; the total f. o. b. mine cost, \$2.15; the sales realization, \$2.30 per ton; and the margin 15 cents per ton. Their production averaged 68,207 tons per month. During November, 1916-March, 1917, the production averaged 111,323 tons per month. The total f. o. b. mine cost was \$2.09 per ton (a decrease of 6 cents from that of July-October, 1916), and the sales realization was \$3 per ton, an increase of 70 cents per ton. This increase is attributable to the high prices at this time for "spot" or market coal, due to the great demand. The margin was 91 cents per ton (an increase of 76 cents over that of July-October, 1916).

A new wage scale, which was an increase over that of 1916, became effective on April 1, 1917. The average labor cost during April-

October, 1917, was \$1.95 per ton, an increase of 39 cents over that of November, 1916–March, 1917. Not all of this increase, however, is attributable to the increased wage scale, since the production averaged 88,216 tons per month, a substantial decrease from that of the previous period. While the official wage scale, effective April 1, 1917, was not changed prior to November 1, 1917, it is probable that the increase in labor cost during the later months of the period April–October was caused by premiums or “bonus” payments made over the union scale of wages.

The sales realization increased from \$2.97 per ton in May to \$3.90 in October.

The average total f. o. b. mine cost during April–October, 1917, was \$2.56 per ton, the sales realization \$3.28, and the margin 72 cents per ton.

No maximum prices were fixed for the output of the Michigan mines by the Executive order of August 21, 1917. Inasmuch as practically all of the product was not only consumed inside the State but, furthermore, within a relatively small area of the State, and was only a fraction of the total coal consumed in Michigan, it did not appear that price regulation at that time was necessary. Later it was seen that the competition of the coal shipped in from outside the State was not effective enough to meet the situation, and that price regulation of the Michigan output was also necessary. Effective October 27, 1917, the following prices were fixed by the Fuel Administration for the Michigan output not then under contract: run of mine, \$3.15; prepared sizes, \$3.60; slack, \$2.20. The average proportions which these three classes form of the total output, based on actual returns for all operators in Michigan who reported to the Federal Trade Commission during the period August–December, 1917, are as follows: run of mine, 40 per cent; prepared sizes, 37 per cent; slack, 23 per cent. If the entire output of the four operators had been sold at the prices established October 27, 1917, it would have brought them a sales realization of \$3.10 per ton. Effective November 1, 1917, a 45-cent increase in the price of noncontracted coal was allowed by Executive order to take care of an increase in the wage scale at that time. The average labor cost of the four operators for November was \$2.57 per ton, an increase of 62 cents over the average for April–October, 1917, but of only 23 cents over that of October, 1917. As the production during October was 93,833 tons, and that during November 96,630 tons, as against a monthly average output of 88,216 tons during April–October, 1917, it is probable that 23 cents rather than 62 cents more nearly reflects the increase in cost due to the wage increase of November 1, 1917. The total f. o. b. mine cost of the four operators for November was \$3.21 per ton, the sales realization \$4.14, and the margin 93 cents per ton.

Effective November 30, 1917, new maximum prices for certain Michigan operators were fixed by the Fuel Administration. In the order seven operators were specified by name. Maximum prices (inclusive of the 45-cent price increase because of the November wage increase) were established for all the output of four operators, and part of the output of two additional operators as follows: run of mine, \$3.85; prepared sizes, \$4.40; slack, \$2.70. Higher maximum prices were allowed on the entire product of one operator, and on the product of certain mines of two operators, the remainder of whose product came under the prices above stated. The seven operators specified in the Fuel Administration's order produced practically the entire output mined in Michigan during 1918. The combined figures for all of them for 1917-18 appear in Table 103. For the period December, 1917-March, 1918, the average monthly total f. o. b. mine cost for the four operators in Table 102 was \$3.34 per ton, the sales realization \$3.92, and the margin 58 cents per ton. The average monthly production was 100,395 tons.

On April 1, 1918, practically the entire output of the district came under governmental regulation, most of the contracts entered into before October 27, 1917, having expired. The average total f. o. b. mine cost during April-May, 1918, was \$3.25 per ton, the sales realization \$3.99, and the margin 74 cents per ton. Effective May 25, 1918; the Fuel Administration made a reduction of 10 cents per ton in the then existing maximum prices. For the period June-August, 1918, the total f. o. b. mine cost of the four operators in Table 102 was \$3.26 per ton, the sales realization \$4.01, and the margin 75 cents per ton. Effective August 16, 1918, the Fuel Administration made an advance in the maximum prices. The same seven operators specified in the order of November 30, 1917, were also named in that of August 16, 1918, the new maximum prices established for the total output of four operators and partial output of two being (inclusive of the 45-cent price increase due to the November 1, 1917, wage increase) as follows: run of mine, \$3.75; prepared sizes, \$4.30; slack, \$2.95. As was the case in the order of November 30, 1917, higher maximum prices were established for the entire output of one operator and the partial output of two others. During the period September-December, 1918, the average total f. o. b. mine cost was \$3.48 per ton, an increase of 22 cents over that of June-August, 1918. The average monthly tonnage during September-December, 1918, was 102,598 tons, as compared with 110,621 tons for the earlier period. In October the tonnage was 128,209 tons, in November 76,709 tons, and in December 92,048 tons. The sales realization for the period was \$3.99 per ton and the margin 51 cents per ton.

The foregoing analyses have been based on Table 102, which covered returns from the four operators for whom costs in the last half of 1916 were available. The close correspondence of their 1917-1918

costs and sales realizations to those shown for seven operators in Table 103 indicates that any conclusion drawn from the facts presented for the four operators holds also for the seven operators, who produced practically the entire output of Michigan.

### 3. Relation of the Cost Subdivisions to the Total f. o. b. Mine Costs.

The following table, based on "Revised" costs, shows the distribution by specified periods between the items of labor, supplies, and general expense of each dollar in the total f. o. b. mine cost:

TABLE 104.—*Distribution between labor, supplies, and general expense of each dollar of total f. o. b. mine cost, 1916-1918, by specified periods, and by calendar years, for four operators producing about 1,200,000 tons annually in Michigan.*

Period.	Labor.	Supplies.	General expense.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
July-October, 1916.....	75	12	13
November, 1916-March, 1917.....	75	12	13
April-October, 1917.....	76	10	14
November, 1917.....	80	8	12
December, 1917-March, 1918.....	79	11	10
April-May, 1918.....	75	15	10
June-August, 1918.....	73	18	9
September-December, 1918.....	73	18	9
Year 1917.....	76	10	11
Year 1918.....	75	16	9

The foregoing table shows that there was relatively slight variation from period to period in the proportion which labor cost formed of the total f. o. b. mine cost throughout the 30 months. The relative changes in the proportions of the supplies and general expense costs are much more marked.

### 4. Relative Increases in the Various Costs, 1916-1918.

In the following table are shown the relative increases in the various costs during November, 1916-December, 1918, based on the costs of July-October, 1916:

TABLE 105.—*Relative increases in the various average costs November, 1916-December, 1918, as compared with July-October, 1916, for four operators producing about 1,200,000 tons annually in Michigan.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine cost.
	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>	<i>Per cent.</i>
July-October, 1916.....	B.	B.	B.	B.
November, 1916-March, 1917.....	14	0	0	13
April-October, 1917.....	20	0	29	19
November, 1917.....	59	0	39	49
December, 1917-March, 1918.....	63	44	21	55
April-May, 1918.....	49	100	18	51
June-August, 1918.....	48	136	0	52
September-December, 1918.....	57	156	7	62

B Base.

↑ Decrease.

The most significant increase was in the labor cost, which went up 57 per cent above that in 1916. The rates of increase in the supplies cost, while much larger than those of the labor cost, had much less effect on the increase of the total f. o. b. mine cost, since, as shown in Table 104, the supplies cost averaged from 8 to 18 per cent of the total f. o. b. mine cost, while the labor cost formed from 73 to 80 per cent.

### 5. Changes in the Relation of Costs to Sales Realizations.

The following table, based on the "Revised" costs and sales realizations shown in Table 102 (see p. 168), shows the distribution for specified periods between the items of labor, supplies, general expense and margin to operator, of each dollar paid for coal to the operator by the purchaser:

TABLE 106.—*Distribution of the amount paid by the purchaser between the various principal costs and the margin, based on each dollar of sales realization, 1916-1918, by specified periods and by calendar years, for four operators producing about 1,200,000 tons annually in the State of Michigan.*

Period.	Labor.	Supplies.	General expense.	Total f. o. b. mine.	Margin.
	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>	<i>Cents.</i>
July-October, 1916.....	70	11	12	93	7
November, 1916-March, 1917.....	52	8	10	70	30
April-October, 1917.....	59	8	11	78	22
November, 1917.....	62	6	10	78	22
December, 1917-March, 1918.....	67	9	9	85	15
April-May, 1918.....	61	12	8	81	19
June-August, 1918.....	59	15	7	81	19
September-December, 1918.....	64	16	7	87	13
Year 1917.....	58	7	11	76	24
Year 1918.....	63	14	8	85	15

These facts are shown in graphic form in Chart 22 (opposite p. 168).

That part of the amount paid by the purchaser which went to labor varied greatly from period to period. It was highest (70 cents out of the dollar) during July-October, 1916, and lowest (52 cents out of the dollar) for November, 1916-March, 1917.

The margin varied greatly from period to period. It was highest (30 cents out of the dollar) during November, 1916-March, 1917, and lowest (7 cents out of the dollar) during July-October, 1916.

It must not, however, be supposed that such margins were all clear profit to the operators. As has been pointed out, the Commission's "Revised" cost figures exclude any charges for interest, income and excess profits taxes, donations, etc., which are expenditures that, while not entering into operating cost, must be met from the margin; nor is there any allowance in the total f. o. b. mine cost for the expense of selling the coal.

Of the eight operators in Michigan whose costs were obtained for 1918, six reported a selling expense on their coal, and two did not



report any. For those that did report, the "Claimed" selling expense varied from one-half cent per ton to 20 cents per ton, the average being 5 cents per ton.

It is fair to assume that a very large part of the output of the two operators who reported no selling expense reached the consumer through the jobbers or sales agencies. Probably also a considerable fraction of the remaining six operators went through such channels.

That part of the output sold through jobbers is sold f. o. b. at the mine, and there is little or no selling expense to be considered, since it is taken care of in the sales realization, and would not come out of the margin.

Considering the total investment as the amount necessary to operate the business, whether in the form of capital stock and surplus, bonds, or other borrowed money, the return on the total investment in the business, after deducting the estimated average selling expense from the margin and before deducting interest on borrowed money or Federal income and excess profits taxes, is shown in the statement following for the years 1916, 1917, and 1918, for the four operators who produced about 1,200,000 tons annually:

	July- December, 1916	1917	1918
Margin between f. o. b. mine cost and sales realization.....	\$0.49	\$0.80	\$0.58
Estimated selling expense.....	.05	.05	.05
Amount per ton earned on investment before deducting interest on borrowed money and Federal income and excess profits taxes.....	.44	.75	.53

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## **CHAPTER V.**

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# **SUMMARY AND CONCLUSIONS.**

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# CHAPTER V.—SUMMARY AND CONCLUSIONS.

## Part I.—SUMMARY.

### 1. General Comparisons of Costs.

The average labor and total f. o. b. mine costs for 1918 varied widely between the different 13 districts in Ohio, Indiana, and Michigan, which are shown in this report. In the following statement, the labor costs and the production of each district are shown for the purpose of ready comparison:

District	1918		
	Production.	Costs per ton.	
		Labor.	Total f. o. b. mine.
<b>Ohio:</b>	<b>Tons.</b>		
No. 1.....	805,517	\$1.77	\$2.48
No. 2.....	828,935	2.06	2.77
No. 3.....	8,321,282	1.43	1.96
No. 3a.....	275,809	1.58	2.31
No. 4.....	2,143,230	1.49	2.06
No. 5.....	476,862	1.61	2.21
No. 6.....	3,872,485	1.67	2.31
No. 7.....	807,894	1.96	2.68
No. 8.....	18,988,643	1.22	1.76
No. 9.....	5,171,527	1.35	1.79
<b>Indiana:</b>			
No. 1.....	25,179,012	1.42	1.86
Brasil-Block.....	653,739	1.87	2.57
<b>State of Michigan.....</b>	<b>1,417,387</b>	<b>2.56</b>	<b>3.41</b>

The following statement derived from the figures shown above, shows the proportions of the total 68,942,332 tons, which were produced at various ranges of cost:

Cost per ton by 25-cent groupings.	Per cent of output produced at specified—	
	Labor costs.	Total f. o. b. mine costs.
	Per cent.	Per cent.
\$1.00-\$1.24.....	27.5	
1.25- 1.49.....	59.2	
1.50- 1.74.....	6.8	
1.75- 1.99.....	3.3	83.6
2.00- 2.24.....	1.2	3.8
2.25- 2.49.....		7.2
2.50- 2.74.....	2.0	2.1
2.75- 2.99.....		1.2
3.00- 3.24.....		
3.25- 3.49.....		2.1
	100.0	100.0

The predominant cause of the differences in the labor and the total f. o. b. mine costs lies in the different thicknesses of seam mined, but many other causes such as mining methods, strikes or other forms of labor shortage, car shortage (see p. —), also affected the various districts differently.

## 2. Increases in Costs and Sales Realizations, 1916-1918.

The following statement shows a comparison of the average annual costs of 1916, 1917, and 1918, for 87 operators in 11 districts. These 87 operators in 1918 produced from 20 to 89 per cent of the tonnage of their respective districts.

Year.	Ohio.													
	District No. 2.		District No. 3.		District No. 4.		Districts Nos. 5 and 9 (combined).		District No. 6.		District No. 7.		District No. 8.	
	Costs per ton.		Costs per ton.		Costs per ton.		Costs per ton.		Costs per ton.		Costs per ton.		Costs per ton.	
	Labor.	Total f.o.b. mine.	Labor.	Total f.o.b. mine.	Labor.	Total f.o.b. mine.	Labor.	Total f.o.b. mine.	Labor.	Total f.o.b. mine.	Labor.	Total f.o.b. mine.	Labor.	Total f.o.b. mine.
1916....	\$1.19	\$1.62	\$0.84	\$1.17	\$0.93	\$1.20	\$0.80	\$1.00	\$0.93	\$1.21	\$1.12	\$1.44	\$0.78	\$1.02
1917....	1.65	2.21	1.09	1.49	1.07	1.43	1.02	1.35	1.19	1.68	1.36	1.90	.98	1.37
1918....	2.24	2.96	1.48	2.01	1.48	1.95	1.34	1.73	1.56	2.17	1.70	2.32	1.25	1.77

Year.	Indiana.				Michigan.	
	District No. 1.		Brazil-Blook District.			
	Costs per ton.		Costs per ton.		Costs per ton.	
	Labor.	Total f.o.b. mine.	Labor.	Total f.o.b. mine.	Labor.	Total f.o.b. mine.
1916.....	\$0.87	\$1.09	\$1.52	\$1.99	\$1.58	\$2.08
1917.....	1.08	1.37	1.73	2.16	1.95	2.55
1918.....	1.42	1.85	2.25	2.77	2.52	3.38

<sup>1</sup> Average for April-December, 1916.

<sup>2</sup> Average for July-December, 1916.

<sup>3</sup> June and July omitted.

The labor costs in 1918 were from 48 to 88 per cent higher, and the total f. o. b. mine costs in 1918 were from 39 to 82 per cent higher than those in 1916.

A comparison of the average annual sales realization of the same 87 operators follows:

Year.	Sales realizations per ton.									
	Ohio.							Indiana.		Michi- gan.
	District No. 2.	District No. 3.	District No. 4.	Districts Nos. 5 and 9 (combined).	District No. 6.	District No. 7.	District No. 8.	District No. 1.	Brasil- Block District.	
1916.....	\$1.79	\$1.38	\$1.51	\$1.21	\$1.51	\$1.78	\$1.32	\$1.32	\$2.10	\$2.58
1917.....	2.91	2.31	2.51	2.48	2.88	3.07	2.46	2.00	2.96	3.35
1918.....	3.55	2.56	2.76	2.59	2.90	3.29	2.45	2.33	3.27	3.96

<sup>1</sup> Average for April-December, 1916. <sup>2</sup> Average for July-December, 1916. <sup>3</sup> June and July omitted.

The sales realizations for 1918 were from 53 to 114 per cent higher than those in 1916.

### 3. Effect of Governmental Price Regulation on Sales Realizations.

In some districts the effect of the establishment of the various governmental price regulations is more evident than in other districts.

In the following table, there is shown for all the districts a comparison between the possible realization obtainable had the entire output been sold at the established maximum prices, and the average sales realization *actually* received during the periods during which the established prices were in effect. The number of operators is that used in arriving at the average actual sales realization shown.

TABLE 107.—Ohio sales realizations.

Date official maximum prices effective.	Sales realization at maximum prices.	Average sales realization actually received.	Period of actual sales realization.	Number of operators.	Sales tonnage.
District No. 1:					
Aug. 21, 1917.....	<sup>1</sup> \$2.06	<sup>2</sup> \$2.98	August, 1917.....	13	122,070
Nov. 1, 1917.....	<sup>1</sup> 2.43	<sup>2</sup> 2.96	September-October, 1917.....	13	218,120
	<sup>1</sup> 2.53	<sup>2</sup> 2.90	November-December, 1917.....	13	183,583
	<sup>1</sup> 2.88	<sup>2</sup> 2.76	January-March, 1918.....	9	212,539
May 25, 1918.....	<sup>1</sup> 2.43	<sup>2</sup> 2.83	April-May, 1918.....	9	124,566
June 29, 1918.....	<sup>1</sup> 2.78	<sup>2</sup> 2.75	June, 1918.....	9	71,715
Aug. 23, 1918.....	<sup>1</sup> 2.88	<sup>2</sup> 2.83	July-August, 1918.....	9	154,111
	<sup>1</sup> 2.83	<sup>2</sup> 2.82	September-December, 1918.....	9	234,336
District No. 2:					
Aug. 21, 1917.....	<sup>1</sup> 2.04	<sup>2</sup> 2.70	September-October, 1917.....	3	37,440
	<sup>1</sup> 2.39	<sup>2</sup> 2.94	do.....	6	81,638
Nov. 1, 1917.....	<sup>1</sup> 2.49	<sup>2</sup> 2.85	August-October, 1917.....	26	226,263
	<sup>1</sup> 2.84	<sup>2</sup> 3.66	November, 1917-January, 1918.....	3	52,704
Nov. 6, 1917.....	<sup>1</sup> 4.24	<sup>2</sup> 3.51	do.....	6	100,099
Jan. 23, 1918.....	<sup>1</sup> 2.49	<sup>2</sup> 3.33	November, 1917.....	26	82,307
	<sup>1</sup> 2.84	<sup>2</sup> 3.28	December, 1917.....	26	67,996
	<sup>1</sup> 3.74	<sup>2</sup> 3.84	February-March, 1918.....	3	33,018
	<sup>1</sup> 3.57	<sup>2</sup> 3.81	do.....	6	51,410
	<sup>1</sup> 3.48	<sup>2</sup> 3.53	April-May, 1918.....	3	33,564
	<sup>1</sup> 3.43	<sup>2</sup> 3.57	do.....	6	57,054
May 25, 1918.....	<sup>1</sup> 2.39	<sup>2</sup> 3.43	January-March, 1918.....	21	186,581
	<sup>1</sup> 2.74	<sup>2</sup> 3.55	April-June, 1918.....	21	221,564
	<sup>1</sup> 3.64	<sup>2</sup> 3.46	June, 1918.....	3	16,972
June, 29 1918.....	<sup>1</sup> 3.49	<sup>2</sup> 3.54	do.....	6	28,421
		<sup>2</sup> 3.47	July-August, 1918.....	2	49,506
		<sup>2</sup> 3.43	do.....	6	66,519
August 23, 1918.....		<sup>2</sup> 3.47	July-September, 1918.....	21	246,004
		<sup>2</sup> 3.44	September-December, 1918.....	3	61,411
		<sup>2</sup> 3.32	do.....	6	110,586
		<sup>2</sup> 3.44	October-December, 1918.....	21	175,182

<sup>1</sup> "Thick vein" prices.

<sup>2</sup> "Thin vein" prices.

<sup>3</sup> Jackson Field prices.

TABLE 107.—Ohio sales realizations—Continued.

Date official maximum prices effective.	Sales realization at maximum prices.	Average sales realization actually received.	Period of actual sales realization.	Number of operators.	Sales tonnage.
<b>District No. 3:</b>					
Aug. 21, 1917.....	<sup>1</sup> 2.07	2.34	September-October, 1917.....	6	15,461
Nov. 1, 1917.....	<sup>2</sup> 2.42	2.51	August-October, 1917.....	45	2,512,265
	<sup>2</sup> 2.52	2.52	November, 1917-March, 1918.....	6	1,067,911
	<sup>2</sup> 2.87	2.57	April-May, 1918.....	6	801,478
		2.54	November, 1917.....	45	745,515
		2.53	December, 1917.....	45	594,932
		2.55	January-March, 1918.....	39	1,887,437
May 25, 1918.....	<sup>1</sup> 2.42	2.53	April-June, 1918.....	39	2,330,358
	<sup>2</sup> 2.77	2.51	June, 1918.....	6	230,281
June 29, 1918.....	2.62	2.62	July-August, 1918.....	6	527,639
		2.62	July-September, 1918.....	39	2,385,733
Aug. 23, 1918.....	2.57	2.57	September-December, 1918.....	6	804,340
		2.58	October-December, 1918.....	39	1,717,595
<b>District No. 3a:</b>					
Aug. 21, 1917.....	<sup>1</sup> 2.00	3.12	August, 1917.....	7	15,208
Nov. 1, 1917.....	<sup>2</sup> 2.35	2.63	September-October, 1917.....	7	28,674
	<sup>2</sup> 2.45	2.70	November-December, 1917.....	7	23,126
	<sup>2</sup> 2.80	2.49	January-March, 1918.....	10	64,648
		2.52	April-May, 1918.....	10	49,423
May 25, 1918.....	<sup>1</sup> 2.35	2.55	June, 1918.....	10	24,424
	<sup>2</sup> 2.70				
June 29, 1918.....	2.95	2.93	July-August, 1918.....	10	49,026
Aug. 23, 1918.....	2.90	2.68	September-December, 1918.....	10	87,112
<b>District No. 4:</b>					
Aug. 21, 1917.....	<sup>1</sup> 2.03	2.34	September-October, 1917.....	3	116,757
Nov. 1, 1917.....	<sup>2</sup> 2.38	2.36	August-October, 1917.....	12	419,458
	<sup>2</sup> 2.48	2.62	November, 1917-March, 1918.....	3	229,833
	<sup>2</sup> 2.83	2.56	April-May, 1918.....	3	103,838
		2.59	November, 1917.....	12	141,999
		2.51	December, 1917.....	12	135,807
		2.63	January-March, 1918.....	20	482,833
		2.61	April-June, 1918.....	20	544,239
May 25, 1918.....	<sup>1</sup> 2.38	2.67	June, 1918.....	3	48,708
	<sup>2</sup> 2.73				
June 29, 1918.....	2.98	2.99	July-August, 1918.....	3	103,530
		2.90	July-September, 1918.....	20	590,042
Aug. 23, 1918.....	2.93	2.89	September-December, 1918.....	3	171,248
		2.78	October-December, 1918.....	20	515,670
<b>Districts Nos. 5 and 9 (combined):</b>					
Aug. 21, 1917.....	<sup>1</sup> 2.09	2.66	September-October, 1917.....	5	800,651
Nov. 1, 1917.....	<sup>2</sup> 2.44	2.72	August-October, 1917.....	11	1,463,218
	<sup>2</sup> 2.54	2.70	November, 1917-March, 1918.....	5	1,696,816
	<sup>2</sup> 2.89	2.46	April-May, 1918.....	5	837,542
		2.84	November, 1917.....	11	414,045
		2.69	December, 1917.....	11	342,349
		2.64	January-March, 1918.....	21	1,204,760
		2.47	April-June, 1918.....	21	1,471,493
May 25, 1918.....	<sup>1</sup> 2.44	2.44	June, 1918.....	5	404,594
	<sup>2</sup> 2.79				
June 29, 1918.....	2.79	2.69	July-August, 1918.....	5	965,431
		2.65	July-September, 1918.....	21	1,634,318
Aug. 23, 1918.....	<sup>2</sup> 2.74	2.58	September-December, 1918.....	5	1,540,365
	<sup>2</sup> 2.59	2.58	October-December, 1918.....	21	1,313,030
<b>District No. 6:</b>					
Aug. 21, 1917.....	<sup>1</sup> \$2.06	\$2.93	September-October, 1917.....	12	271,242
Nov. 1, 1917.....	<sup>2</sup> 2.41	2.93	August-October, 1917.....	42	712,728
	<sup>2</sup> 2.51	3.01	November, 1917-March, 1918.....	12	741,809
	<sup>2</sup> 2.86	3.08	November, 1917.....	42	246,847
		3.12	December, 1917.....	42	231,079
		2.94	January-March, 1918.....	53	895,599
Mar. 21, 1918.....	2.51	2.77	April-May, 1918.....	12	324,594
		2.74	April-June, 1918.....	53	940,659
May 25, 1918.....	2.41	2.71	June, 1918.....	12	167,732
June 29, 1918.....	3.01	3.00	July-August, 1918.....	12	369,022
		2.96	July-September, 1918.....	53	1,079,794
Aug. 23, 1918.....	2.96	2.94	September-December, 1918.....	12	539,160
		2.91	October-December, 1918.....	53	836,085
<b>District No. 7:</b>					
Aug. 21, 1917.....	<sup>1</sup> 2.04	2.94	September-October, 1917.....	3	66,043
Nov. 1, 1917.....	<sup>2</sup> 2.39	3.14	August-October, 1917.....	14	185,062
	<sup>2</sup> 2.49	3.33	November, 1917-January, 1918.....	3	102,143
	<sup>2</sup> 2.84	3.46	November, 1917.....	14	69,336

<sup>1</sup> "Thick vein" prices.<sup>2</sup> "Thin vein" prices<sup>3</sup> District No. 5. <sup>4</sup> District No. 9.

TABLE 107.—Ohio sales realizations—Continued.

Date official maximum prices effective.	Sales realization at maximum prices.	Average sales realization actually received.	Period of actual sales realization.	Number of operators.	Sales tonnage.
District No. 7—Contd.	<i>Per ton.</i>	<i>Per ton.</i>			
Nov. 6, 1917.....	<sup>1</sup> 2.49 <sup>2</sup> 2.84 <sup>3</sup> 4.24	3.52	December, 1917.....	14	63,485
Jan. 23, 1918.....	<sup>1</sup> 2.49 <sup>2</sup> 2.84 <sup>3</sup> 3.74	3.22 3.01 3.44	February-March, 1918..... April-May, 1918..... January-March, 1918.....	3 3 15	67,977 64,907 212,609
May 25, 1918.....	<sup>1</sup> 2.39 <sup>2</sup> 2.74 <sup>3</sup> 3.64	3.28 3.04	April-June, 1918..... June, 1918.....	15 3	194,418 27,957
June 29, 1918.....	3.51	3.46	July-August, 1918.....	3	81,155
Aug. 23, 1918.....	3.46	3.57 3.42 3.49	July-September, 1918..... September-December, 1918..... October-December, 1918.....	15 3 15	224,588 128,473 178,040
District No. 8:					
Aug. 21, 1917.....	<sup>1</sup> 2.05 <sup>2</sup> 2.40	2.55 2.60 2.72	September-October, 1917..... .....do..... August-October, 1917.....	14 18 54	1,315,257 1,518,983 5,129,827
Nov. 1, 1917.....	<sup>1</sup> 2.50 <sup>2</sup> 2.85	2.57 2.63 2.83	November, 1917-March, 1918..... .....do..... November, 1917.....	14 18 54	2,864,284 3,374,182 1,857,177
Mar. 21, 1918.....	2.50	2.65 2.62 2.41	December, 1917..... January-March, 1918..... April-May, 1918.....	54 64 14	1,409,581 3,751,755 1,427,467
May 25, 1918.....	2.40	2.46 2.40 2.42	.....do..... April-June, 1918..... June, 1918.....	18 64 14	1,672,113 4,956,977 737,042
June 29, 1918.....	2.43	2.44 2.46 2.51 2.44	.....do..... July-December, 1918..... .....do..... July-September, 1918..... October-December, 1918.....	14 18 18 64 64	4,284,259 4,935,087 5,336,347 4,525,334

<sup>1</sup>"Thick vein" prices. <sup>2</sup>"Thin vein" prices. <sup>3</sup>Deerfield or Palmyra Field and Massillon Field prices.

TABLE 108.—Indiana sales realizations.

Date official maximum prices effective.	Sales realization at maximum prices.	Average sales realization actually received.	Period of actual sales realization.	Number of operators.	Sales tonnage.
District No. 1:	<i>Per ton.</i>	<i>Per ton.</i>			
Aug. 21, 1917.....	\$2.01	\$2.02 2.09 2.37	September-October, 1917..... August-October, 1917..... November, 1917-March, 1918.....	33 78 33	2,756,048 4,636,451 5,980,523
Nov. 1, 1917.....	2.46	2.40 2.43 2.43 2.38 2.36	April, 1918..... November, 1917..... December, 1917..... January-March, 1918..... May, 1918.....	33 78 78 92 33	1,267,604 1,825,003 1,689,706 5,861,085 1,979,905
May 1, 1918.....	2.47	2.35 2.30 2.31 2.28	April-June, 1918..... June-December, 1918..... July-September, 1918..... October-December, 1918.....	92 33 33 92	6,276,945 8,773,374 6,992,363 6,046,923
May 25, 1918.....	2.37				
Brasil-Block District:					
Aug. 21, 1917.....	2.12	2.73 2.80 2.80	September, 1917..... August-October, 1917..... October, 1917.....	4 8 4	26,528 124,991 28,016
Oct. 1, 1917.....	2.72	3.23	November, 1917-March, 1918.....	4	130,199
Nov. 1, 1917.....	3.17	3.15 3.03 3.05 3.06	April, 1918..... November, 1917..... December, 1917..... January-March, 1918.....	4 8 8 10	24,303 41,442 41,429 160,105
May 1, 1918.....	3.45	3.37 3.04 3.30	May, 1918..... April-June, 1918..... June-December, 1918.....	4 10 4	26,578 179,055 161,379
May 25, 1918.....	3.35	3.13 3.09	July-September, 1918..... October-December, 1918.....	10 10	182,669 131,880



TABLE 109.—*Michigan sales realizations.*

Date official maximum prices effective.	Sales realization at maximum prices.	Average sales realization actually received.	Period of actual sales realization.	Number of operators.	Sales tonnage.
	<i>Per ton.</i>	<i>Per ton.</i>			
Oct. 27, 1917.....	\$3.10	\$4.14	November, 1917.....	4	76, 873
Nov. 1, 1917.....	3.55	4.11	do.....	7	91, 562
Nov. 28, 1917.....	( <sup>1</sup> )	3.92	December, 1917-March, 1918.....	4	380, 145
		3.95	do.....	7	485, 831
		3.99	April-May, 1918.....	4	197, 826
		4.00	do.....	7	223, 352
May 25, 1918.....	( <sup>2</sup> )	4.01	June-August, 1918.....	4	331, 862
		4.03	do.....	7	371, 373
Aug. 16, 1918.....	( <sup>1</sup> )	3.99	September-December, 1918.....	4	410, 393
		4.01	do.....	7	458, 769

<sup>1</sup> Different prices were specified for various operators.<sup>2</sup> A reduction of 10 cents per ton was made in the maximum prices in force May 25, 1918.

The differences between the maximum possible realization, based on established prices, and the average sales realizations *actually* obtained by the operators are probably due to a variety of causes, such as the proportions of the output during any period sold under relatively high or low priced contracts, the character of the demand in the market reached by the coal from a particular district, etc.

#### 4. Effect of Margins on Production.

The following statement shows the average monthly tonnage, by districts, together with the margins, during 1917 and 1918, by three periods: (1) The eight months (January-August, 1917) preceding any governmental price control over output; (2) the seven months (September, 1917-March, 1918) during which there was governmental price control over part of the output; and (3) the nine months (April-December, 1918) during which there was governmental control over practically the entire output:

	January-August, 1917.		September, 1917-March, 1918.		April-December, 1918.	
	Average monthly output.	Margin per ton.	Average monthly output.	Margin per ton.	Average monthly output.	Margin per ton.
<b>Ohio:</b>	<i>Tons.</i>		<i>Tons.</i>		<i>Tons.</i>	
District No. 2.....	21, 208	\$0.79	17, 688	\$0.63	20, 161	\$0.54
District No. 3.....	256, 215	.93	224, 767	.55	231, 526	.55
District No. 4.....	56, 332	1.21	49, 501	.75	47, 642	.87
Districts Nos. 5 and 9 (combined)	379, 263	1.15	356, 781	1.03	415, 326	.83
District No. 6.....	148, 299	1.32	144, 658	.91	155, 870	.70
District No. 7.....	31, 747	1.33	33, 142	.82	33, 528	1.03
District No. 8.....	612, 635	1.14	597, 906	.88	716, 189	.87
<b>Indiana:</b>						
District No. 1.....	1, 218, 014	1.64	1, 359, 806	.59	1, 383, 166	.45
Brazil-Block District.....	25, 066	.88	26, 301	.58	23, 594	.51
<b>Michigan.....</b>	<b>97, 020</b>	<b>.81</b>	<b>96, 436</b>	<b>.69</b>	<b>104, 453</b>	<b>.65</b>

<sup>1</sup> Based on 6 months' figures only, as no information was received for June or July, 1917.

The foregoing facts indicate clearly that the margin is but one of several factors which may stimulate or retard production. Production was also influenced by such conditions as strikes or other forms of labor shortage, transportation facilities, and the demand for coal in the markets available to the mines, etc. Explanations for the rise or fall of production are to be found in the particular conditions which existed during each period in each district.

## Part II.—CONCLUSIONS.

In conclusion, it is desirable to point out the diverse conditions which have existed during the past three years between the different coal-producing districts in Ohio, Indiana, and Michigan. In some districts the margins allowed to the operators during the periods of partial or complete governmental control over the output, while substantially higher than those obtained by the operators themselves prior to any governmental regulation of prices, were accompanied by a decrease of output, while, in other districts margins substantially lower than those obtained prior to governmental regulation, were accompanied by an increase in output. The explanation of such different results must be sought in the particular conditions which have existed in each producing district. There is great danger in applying widely some of the generalizations drawn from the experience of particular districts or States. The collecting of definite up-to-date information, covering the whole industry, and making it readily available for use is, therefore, highly desirable.

# APPENDIX.

## LIST OF APPENDIX TABLES.

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TABLE 1.—Total "Revised" labor cost, by quarterly and yearly periods for 1918, for 9 operators producing bituminous coal in District No. 1 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.																				
1.33	21,819	10.3	10.3	1	\$1.54	19,919	9.8	9.8	1	\$1.42	23,111	10.2	10.2	1	\$1.51	17,876	11.0	11.0	1	\$1.45	79,813	9.9	9.9	9.9	1	\$1.45	79,813	9.9	9.9	9.9	1																		
1.40	39,588	18.7	29.0	1	1.57	17,007	8.3	18.1	1	1.56	44,467	19.6	28.6	1	1.61	41,236	25.3	26.3	1	1.61	145,781	18.6	28.4	9.9	1	1.61	145,781	18.6	28.4	9.9	1																		
1.60	17,042	8.1	37.1	1	1.60	37,103	18.2	36.3	1	1.59	42,809	18.9	48.7	1	1.53	27,603	17.0	53.3	1	1.64	152,602	18.9	47.3	9.9	1	1.64	152,602	18.9	47.3	9.9	1																		
1.71	34,754	16.4	53.5	1	1.68	33,803	16.6	52.9	1	1.53	47,003	21.0	69.7	1	1.50	37,896	23.2	76.5	1	1.74	61,027	7.6	54.9	9.9	1	1.74	61,027	7.6	54.9	9.9	1																		
1.71	46,557	22.0	75.5	1	1.73	44,020	21.6	74.5	1	1.92	15,330	6.8	82.8	1	2.03	9,777	6.0	82.7	1	1.78	176,106	21.8	76.7	9.9	1	1.78	176,106	21.8	76.7	9.9	1																		
1.86	27,059	12.8	88.3	1	2.01	30,153	14.8	89.3	1	2.00	14,289	6.3	82.8	1	2.08	2,054	1.2	83.7	1	2.04	49,086	6.1	82.8	9.9	1	2.04	49,086	6.1	82.8	9.9	1																		
1.97	6,481	2.6	90.9	1	2.05	13,666	6.7	96.0	1	2.08	3,619	1.6	84.4	1	2.38	6,792	4.2	87.9	1	2.13	108,920	2.0	84.8	9.9	1	2.13	108,920	2.0	84.8	9.9	1																		
2.01	13,288	6.2	97.1	1	2.14	4,167	2.0	98.0	1	2.22	3,852	1.7	86.1	1	2.69	18,054	11.0	98.9	1	2.17	108,796	13.8	98.1	9.9	1	2.17	108,796	13.8	98.1	9.9	1																		
2.17	9,080	2.9	100.0	1	2.22	4,191	2.0	100.0	1	2.28	31,550	13.9	100.0	1	3.03	1,852	1.1	100.0	1	2.23	15,408	1.9	100.0	9.9	1	2.23	15,408	1.9	100.0	9.9	1																		
1.67	211,688	100.0	100.0	9	1.76	204,029	100.0	100.0	9	1.78	226,660	100.0	100.0	9	1.90	163,140	100.0	100.0	9	1.77	806,517	100.0	100.0	9.9	1	1.77	806,517	100.0	100.0	9.9	1																		

TABLE 2.—Total "Revised" supply cost, by quarterly and yearly periods for 1918, for 9 operators producing bituminous coal in District No. 1 of the State of Ohio.

January-March, 1918, inclusive.						April-June, 1918, inclusive.						July-September, 1918, inclusive.						October-December, 1918, inclusive.						Year 1918.									
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.				
100.00	6,080	2.9	2.9	1	100.00	4,167	2.0	2.0	1	100.00	3,619	1.6	1.6	1	100.00	2,054	1.2	1.2	1	100.00	15,920	7.8	7.8	2.0	1	100.00	15,920	7.8	7.8	2.0			
15	61,407	29.0	31.9	2	17	17,007	8.3	10.3	1	15	14,289	6.3	7.9	1	15	9,777	6.0	7.2	1	19	61,027	32.6	40.4	9.6	1	19	61,027	32.6	40.4	9.6			
18	13,298	6.2	38.1	1	21	30,153	14.8	25.1	1	24	15,330	6.8	14.7	1	24	27,023	17.0	24.2	1	20	128,899	16.0	56.4	25.6	2	20	128,899	16.0	56.4	25.6			
21	17,042	8.1	46.2	1	25	13,666	6.7	31.8	1	19	67,578	29.8	44.5	2	35	6,792	4.2	28.4	1	23	148,761	18.5	74.9	44.1	1	23	148,761	18.5	74.9	44.1			
22	46,587	22.0	68.2	1	25	19,919	9.8	41.6	1	24	3,882	1.7	46.2	1	31	17,876	11.0	59.4	1	26	106,798	13.3	88.2	57.4	1	26	106,798	13.3	88.2	57.4			
23	37,039	12.8	81.0	1	28	48,211	23.6	65.2	2	25	31,580	13.9	60.1	1	32	37,886	23.2	82.6	1	28	191,512	23.7	111.9	81.1	2	28	191,512	23.7	111.9	81.1			
24	37,039	12.8	81.0	1	28	48,211	23.6	65.2	2	25	31,580	13.9	60.1	1	32	37,886	23.2	82.6	1	28	191,512	23.7	111.9	81.1	2	28	191,512	23.7	111.9	81.1			
26	5,481	2.6	83.6	1	38	37,103	18.2	83.4	1	40	47,608	21.0	81.1	1	40	47,608	21.0	81.1	1	40	47,608	21.0	81.1	1	40	47,608	21.0	81.1	1	40	47,608	21.0	81.1
52	34,754	16.4	100.0	9	52	35,803	16.6	100.0	9	52	42,809	18.9	100.0	9	74	41,236	25.3	100.0	1	74	41,236	25.3	100.0	1	74	41,236	25.3	100.0	1	74	41,236	25.3	100.0
25	211,688	100.0	100.0	9	32	204,029	100.0	100.0	9	29	226,660	100.0	100.0	9	40	163,140	100.0	100.0	9	40	163,140	100.0	100.0	9	40	163,140	100.0	100.0	9	40	163,140	100.0	100.0

1 Included in labor cost.

TABLE 3.—Total "Revised" general expenses, by quarterly and yearly periods for 1918, for 9 operators producing bituminous coal in District No. 1 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.																				
.22	34,754	16.4	16.4	1	.25	32,903	16.6	16.6	1	.22	42,909	18.9	18.9	1	.27	41,226	25.3	25.3	1	.24	41,226	25.3	25.3	1	.24	152,602	18.9	18.9	1	.30	143,701	18.3	37.4	1															
.28	36,588	18.7	35.1	1	.29	37,106	18.2	34.8	1	.24	44,607	19.6	38.5	1	.34	49,777	6.0	31.3	1	.36	143,701	18.3	43.5	1	.36	49,086	6.1	43.5	1	.30	61,027	7.6	51.1	1															
.31	19,378	9.1	44.2	2	.34	13,696	6.7	41.5	1	.28	14,289	6.3	44.8	1	.53	27,008	17.0	58.3	1	.54	61,027	7.6	51.1	1	.38	61,027	7.6	51.1	1	.38	15,920	2.0	53.1	1															
.42	17,042	8.1	52.3	1	.42	19,919	9.8	51.3	1	.29	16,330	6.8	51.9	1	.68	16,792	4.2	63.5	1	.68	106,796	13.3	66.4	1	.42	106,796	13.3	66.4	1	.42	106,796	13.3	66.4	1															
.46	46,558	23.1	75.4	2	.43	34,320	16.8	68.1	2	.45	26,730	11.8	77.3	2	.69	56,840	34.2	97.7	2	.69	56,840	34.2	97.7	2	.69	79,813	9.9	76.3	1	.50	79,813	9.9	76.3	1															
.49	46,587	22.0	87.4	1	.54	44,020	21.6	89.7	1	.49	47,608	21.0	88.3	1	.72	2,654	1.2	98.9	1	.55	176,108	21.8	98.1	1	.55	176,108	21.8	98.1	1	.55	176,108	21.8	98.1	1															
.62	5,481	2.6	100.0	1	.57	4,191	2.0	100.0	1	.69	3,852	1.7	100.0	1	1.65	1,852	1.1	100.0	1	.75	15,406	1.9	100.0	1	.75	15,406	1.9	100.0	1	.75	15,406	1.9	100.0	1															
.38	211,688	100.0	100.0	9	.40	204,029	100.0	100.0	9	.35	226,660	100.0	100.0	9	.52	163,140	100.0	100.0	9	.41	805,517	100.0	100.0	9	.41	805,517	100.0	100.0	9	.41	805,517	100.0	100.0	9															

TABLE 4.—Total "Revised" f. o. b. mine cost, by quarterly and yearly periods for 1918, for 9 operators producing bituminous coal in District No. 1 of the State of Ohio.

January-March, 1918, inclusive.						April-June, 1918, inclusive.						July-September, 1918, inclusive.						October-December, 1918, inclusive.						Year 1918.					
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
\$1.90	39,588	18.7	18.7	1	\$1.90	44,467	19.6	19.6	1	\$2.36	17,876	11.0	11.0	1	\$2.14	145,761	18.5	18.5	1	\$2.14	145,761	18.5	18.5	1	\$2.14	145,761	18.5	18.5	1
1.95	21,819	10.3	29.0	1	2.06	22,111	10.2	29.8	1	2.50	27,663	17.0	28.0	1	2.15	79,813	9.9	28.4	1	2.15	79,813	9.9	28.4	1	2.15	79,813	9.9	28.4	1
2.23	17,042	8.1	37.1	1	2.32	17,007	8.3	36.3	1	2.52	9,777	6.0	34.0	1	2.31	61,027	7.6	36.0	1	2.31	61,027	7.6	36.0	1	2.31	61,027	7.6	36.0	1
2.43	46,587	22.0	59.1	2	2.39	57,088	25.2	61.8	2	2.62	41,236	18.3	50.3	2	2.50	132,022	18.9	54.9	2	2.50	132,022	18.9	54.9	2	2.50	132,022	18.9	54.9	2
2.44	84,754	16.4	75.5	2	2.53	3,619	1.6	63.4	1	2.80	2,034	1.2	60.5	1	2.55	13,920	2.0	56.9	1	2.55	13,920	2.0	56.9	1	2.55	13,920	2.0	56.9	1
2.48	6,080	2.9	78.4	1	2.57	4,167	2.0	76.5	1	2.91	37,896	23.2	83.7	1	2.60	49,098	6.1	63.0	1	2.60	49,098	6.1	63.0	1	2.60	49,098	6.1	63.0	1
2.50	13,298	6.2	84.6	1	2.65	30,153	13.9	98.3	1	3.31	6,792	4.2	87.9	1	2.61	176,108	21.8	84.8	1	2.61	176,108	21.8	84.8	1	2.61	176,108	21.8	84.8	1
2.56	27,039	12.8	97.4	1	2.96	3,882	1.7	100.0	1	3.78	18,034	11.0	98.9	1	2.91	105,798	13.3	98.1	1	2.91	105,798	13.3	98.1	1	2.91	105,798	13.3	98.1	1
2.85	5,481	2.6	100.0	1	3.15	3,882	1.7	100.0	1	5.08	1,852	1.1	100.0	1	3.26	15,408	1.9	100.0	1	3.26	15,408	1.9	100.0	1	3.26	15,408	1.9	100.0	1
2.30	211,688	100.0	100.0	9	2.42	226,660	100.0	100.0	9	2.82	103,140	100.0	100.0	9	2.48	805,517	100.0	100.0	9	2.48	805,517	100.0	100.0	9	2.48	805,517	100.0	100.0	9

TABLE 5.—Total sales realization, by quarterly and yearly periods for 1918, for 9 operators producing bituminous coal in District No. 1 of the State of Ohio.

January-March, 1918, inclusive.						April-June, 1918, inclusive.						July-September, 1918, inclusive.						October-December, 1918, inclusive.						Year 1918.					
Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01
\$2.52	35,545	16.7	19.7	1	\$2.52	17,007	8.2	8.2	1	\$2.52	42,288	19.6	19.6	1	\$2.52	40,485	24.9	24.9	1	\$2.52	154,282	19.1	19.1	1	\$2.52	154,282	19.1	19.1	1
2.53	21,919	10.3	27.0	1	2.53	36,044	17.5	25.7	1	2.53	27,111	10.2	29.1	1	2.53	17,777	6.0	30.9	1	2.53	79,833	9.0	29.0	1	2.53	79,833	9.0	29.0	1
2.54	29,588	13.6	40.6	1	2.54	19,919	9.7	32.4	1	2.54	17,289	8.3	33.7	1	2.54	17,696	11.0	41.9	1	2.54	91,997	7.8	36.8	1	2.54	91,997	7.8	36.8	1
2.55	27,533	12.6	53.2	1	2.55	4,181	2.0	37.4	1	2.55	13,289	6.3	35.7	1	2.55	13,044	11.1	43.2	1	2.55	12,940	2.0	38.8	1	2.55	12,940	2.0	38.8	1
2.56	27,060	12.3	65.5	1	2.56	4,167	2.0	37.4	1	2.56	9,360	4.3	37.7	1	2.56	13,854	11.1	43.2	1	2.56	13,854	1.9	40.5	1	2.56	13,854	1.9	40.5	1
2.57	27,036	12.3	77.8	1	2.57	44,000	21.1	69.8	1	2.57	43,407	19.6	39.6	1	2.57	1,832	1.5	45.7	1	2.57	143,701	18.4	58.9	1	2.57	143,701	18.4	58.9	1
2.58	27,037	12.3	89.7	1	2.58	50,769	24.6	85.4	1	2.58	47,993	21.3	35.2	1	2.58	27,793	4.2	49.9	1	2.58	106,793	13.2	72.1	1	2.58	106,793	13.2	72.1	1
2.59	15,547	7.1	100.0	1	2.59	30,153	14.6	100.0	1	2.59	15,330	7.3	100.0	1	2.59	27,898	23.3	100.0	1	2.59	176,193	21.3	100.0	1	2.59	176,193	21.3	100.0	1
2.70	212,539	100.0	100.0	9	2.81	296,270	100.0	100.0	9	2.81	296,078	100.0	100.0	9	2.84	192,869	100.0	100.0	9	2.80	807,364	100.0	100.0	9	2.80	807,364	100.0	100.0	9

TABLE 6.—Total "Revised" labor cost, by quarterly and yearly periods for 1918, for 21 operators producing bituminous coal in District No. 2 of the State of Ohio.

January-March, 1918, inclusive.						April-June, 1918, inclusive.						July-September, 1918, inclusive.						October-December, 1918, inclusive.						Year 1918.						
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
\$1.38	5,081	2.7	2.7	1	\$1.34	6,841	3.1	3.1	1	\$1.38	7,119	2.9	2.9	1	\$1.55	16,801	9.5	9.5	1	\$1.55	22,775	16,801	9.5	9.5	1	\$1.55	22,775	2.8	2.8	1
1.50	6,174	3.3	16.0	2	1.50	28,576	12.9	16.0	2	1.46	22,403	6.1	12.0	2	1.67	11,700	6.7	16.3	3	1.67	74,004	11,700	6.7	16.3	3	1.67	74,004	11.7	11.7	1
1.64	18,627	10.2	29.2	3	1.51	19,231	8.7	24.8	3	1.51	16,816	6.8	18.8	3	1.68	3,724	2.1	21.4	4	1.68	22,019	3,724	2.1	21.4	4	1.68	22,019	20.8	20.8	1
1.74	5,962	3.2	32.4	4	1.55	11,281	5.1	35.7	4	1.55	12,988	9.4	28.5	4	1.88	5,966	2.2	23.6	5	1.88	45,486	5,966	2.2	23.6	5	1.88	45,486	5.5	5.5	1
1.77	13,673	8.4	39.9	5	1.77	13,013	6.9	39.1	5	1.77	10,932	2.3	33.4	5	1.91	3,886	2.2	37.0	6	1.91	26,108	3,886	2.2	37.0	6	1.91	26,108	17.9	17.9	1
1.78	6,072	3.3	43.6	6	1.77	7,880	3.4	40.8	6	1.77	7,035	2.9	33.4	6	1.93	3,215	1.8	41.8	7	1.93	17,320	3,215	1.8	41.8	7	1.93	17,320	33.1	33.1	1
1.86	7,462	3.3	50.6	7	1.86	3,867	1.7	50.6	7	1.86	4,977	2.0	39.8	7	2.02	3,825	2.2	43.0	8	2.02	80,456	3,825	2.2	43.0	8	2.02	80,456	47.9	47.9	1
1.89	6,132	2.8	56.8	8	1.89	21,686	9.8	56.8	8	1.89	27,704	11.3	51.1	8	2.11	2,157	1.4	44.3	9	2.11	14,976	2,157	1.4	44.3	9	2.11	14,976	51.9	51.9	1
2.03	8,137	2.8	62.4	9	2.03	3,636	1.5	62.4	9	2.03	4,689	1.9	77.2	9	2.13	2,534	1.4	46.3	10	2.13	18,361	2,534	1.4	46.3	10	2.13	18,361	76.8	76.8	1
2.13	17,645	9.5	66.3	10	2.13	37,809	17.1	66.3	10	2.13	7,710	3.1	85.6	10	2.24	1,186	0.7	47.3	11	2.24	15,844	1,186	0.7	47.3	11	2.24	15,844	81.5	81.5	1
2.18	7,337	2.9	69.3	11	2.18	16,147	7.3	83.7	11	2.18	4,566	1.9	87.5	11	2.29	8,935	5.1	84.1	12	2.29	182,859	8,935	5.1	84.1	12	2.29	182,859	93.8	93.8	1
2.24	7,606	3.0	79.4	12	2.24	4,012	1.8	85.5	12	2.24	7,755	1.9	88.8	12	2.36	2,660	1.6	86.6	13	2.36	31,354	2,660	1.6	86.6	13	2.36	31,354	98.1	98.1	1
2.30	37,604	20.1	99.3	13	2.30	9,101	4.1	89.6	13	2.30	8,425	3.8	90.4	13	2.45	2,998	1.4	93.0	14	2.45	16,046	2,998	1.4	93.0	14	2.45	16,046	99.8	99.8	1
2.41	10,469	8.9	91.2	14	2.41	8,425	3.8	93.4	14	2.41	7,755	1.9	90.4	14	2.60	4,232	2.4	93.0	15	2.60	69,825	4,232	2.4	93.0	15	2.60	69,825	99.9	99.9	1
2.45	6,478	2.9	93.5	15	2.45	4,105	1.8	95.2	15	2.45	3,241	1.6	90.4	15	2.67	8,722	6.0	93.0	16	2.67	14,751	8,722	6.0	93.0	16	2.67	14,751	99.9	99.9	1
2.48	2,834	2.3	94.9	16	2.48	2,998	1.4	96.6	16	2.48	18,397	7.5	100.0	16	2.78	2,562	1.5	94.5	17	2.78	10,986	2,562	1.5	94.5	17	2.78	10,986	100.0	100.0	1
2.77	2,863	1.4	96.9	17	2.77	1,484	0.8	100.0	17	2.77	5,102	2.1	100.0	17	2.83	2,399	1.4	95.6	18	2.83	22,081	2,399	1.4	95.6	18	2.83	22,081	100.0	100.0	1
2.81	2,995	1.1	100.0	18	2.81	2,995	1.1	100.0	18	2.81	2,995	1.1	100.0	18	2.99	2,399	1.4	95.6	19	2.99	828,935	2,399	1.4	95.6	19	2.99	828,935	100.0	100.0	1
2.87	2,995	1.1	100.0	19	2.87	2,995	1.1	100.0	19	2.87	2,995	1.1	100.0	19	2.99	2,399	1.4	95.6	20	2.99	828,935	2,399	1.4	95.6	20	2.99	828,935	100.0	100.0	1
2.07	186,464	109.0	100.0	21	2.07	221,521	100.0	100.0	21	2.07	245,791	100.0	100.0	21	2.07	245,791	100.0	100.0	21	2.07	828,935	175,156	100.0	100.0	21	2.07	828,935	100.0	100.0	21

TABLE 7.—Total "Revised" supply cost, by quarterly and yearly periods for 1918, for 21 operators producing bituminous coal in District No. 2 of the State of Ohio.

January-March, 1918, inclusive.					April-June, 1918, inclusive.					July-September, 1918, inclusive.					October-December, 1918, inclusive.					Year 1918.					
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
5.02	5,132	2.8	2.8	1	50.00	7,580	3.4	3.4	1	50.00	7,005	2.9	2.9	1	50.00	3,391	3.1	3.1	1	50.00	25,150	3.0	3.0	1	50.00
5.04	5,952	2.7	5.6	1	1.09	2,998	1.4	4.8	1	1.11	7,119	2.9	5.8	1	1.14	2,562	1.5	4.6	1	1.14	10,985	1.3	4.3	1	1.14
5.10	6,081	2.7	8.3	1	1.10	3,097	1.4	6.2	1	1.12	27,704	11.3	17.1	1	1.18	18,678	10.6	15.2	1	1.18	18,361	2.2	6.5	1	1.18
5.13	11,661	6.3	15.0	3	1.14	11,237	5.1	11.3	1	1.13	22,403	9.1	26.2	1	1.19	16,591	9.5	24.7	1	1.19	74,004	8.9	15.4	1	1.19
5.14	25,914	13.9	28.9	3	1.16	19,337	8.7	20.0	1	1.17	3,833	1.6	27.8	1	1.20	3,982	2.2	28.9	1	1.20	80,428	9.7	25.1	1	1.20
5.15	6,092	3.3	32.2	1	1.18	21,636	9.8	29.8	1	1.18	29,889	12.2	40.0	3	1.22	9,846	5.6	32.5	2	1.22	53,181	6.4	31.5	2	1.22
5.17	42,312	22.7	54.9	2	1.19	16,147	7.3	37.1	1	1.21	10,932	4.4	44.4	1	1.23	2,524	1.4	33.9	1	1.23	22,775	2.8	34.3	1	1.23
5.19	18,627	10.0	64.9	1	1.23	69,188	31.3	68.4	3	1.23	6,685	2.3	46.7	1	1.28	47,270	27.0	60.9	1	1.28	16,046	1.9	36.2	1	1.28
5.21	10,874	5.8	70.7	1	1.24	11,281	5.1	73.5	1	1.24	8,479	3.5	80.2	2	1.30	14,201	8.1	69.0	1	1.30	204,823	24.8	61.0	2	1.30
5.22	15,673	8.4	79.1	1	1.25	21,130	9.5	83.0	3	1.25	74,968	30.5	86.6	2	1.32	6,133	3.5	72.5	2	1.32	19,783	2.4	63.4	1	1.32
5.26	13,117	7.0	86.1	1	1.27	3,987	1.7	84.7	1	1.26	4,755	1.9	82.6	1	1.31	13,441	7.7	80.2	1	1.31	45,486	5.5	68.9	1	1.31
5.28	2,693	1.4	87.5	1	1.28	5,328	2.4	87.1	1	1.28	16,816	6.8	89.4	1	1.44	3,896	2.2	82.4	1	1.44	107,017	12.9	81.3	2	1.44
5.27	7,452	4.0	91.5	1	1.29	3,626	1.6	88.7	1	1.29	4,977	2.0	91.4	1	1.46	3,157	1.8	84.2	1	1.46	64,008	7.7	89.5	3	1.46
5.33	4,334	2.9	94.4	1	1.32	6,341	3.1	91.8	1	1.32	8,314	3.4	94.8	1	1.51	7,122	4.1	88.3	1	1.51	40,032	4.8	94.3	1	1.51
5.32	4,384	2.3	96.7	1	1.33	4,449	2.0	93.8	1	1.33	5,102	2.1	97.9	1	1.63	11,780	6.7	95.0	1	1.63	14,844	1.8	96.1	1	1.63
5.45	6,072	3.3	100.0	1	1.44	7,484	3.4	100.0	1	1.44	5,102	2.1	100.0	1	1.64	8,722	5.0	100.0	1	1.64	32,031	3.9	100.0	1	1.64
19	186,464	100.0	100.0	21	22	221,524	100.0	100.0	21	22	245,791	100.0	100.0	21	31	175,156	100.0	100.0	21	31	828,985	100.0	100.0	21	31

1 Included in labor cost.





TABLE 9.—Total "Revised" f. o. b. mine cost, by quarterly and yearly periods for 1918, for 21 operators producing bituminous coal in District No. 2 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.															
1	5,081	2.3	2.7	1	1.81	19,337	8.7	8.7	1	1.90	22,493	9.1	9.1	1	2.04	22,775	8.9	8.9	1	2.18	74,004	8.9	8.9	1	2.24	22,775	8.9	8.9	1	2.24	74,004	8.9	8.9	1															
2	6,174	3.0	6.0	1	2.08	6,841	3.1	11.8	1	2.08	27,065	9.4	21.4	1	2.20	25,108	9.1	20.8	1	2.24	25,108	9.1	20.8	1	2.24	25,108	9.1	20.8	1	2.24	25,108	9.1	20.8	1															
3	18,627	10.0	18.2	1	2.37	11,580	3.4	25.3	1	2.37	27,701	11.3	32.6	1	2.44	31,281	4.1	27.9	1	2.44	31,281	4.1	27.9	1	2.44	31,281	4.1	27.9	1	2.44	31,281	4.1	27.9	1															
4	5,952	3.3	27.6	1	2.59	6,298	2.8	30.4	1	2.59	10,932	4.4	36.8	1	2.82	7,186	4.1	32.0	1	2.82	22,019	2.7	30.6	1	2.82	22,019	2.7	30.6	1	2.82	22,019	2.7	30.6	1															
5	9,092	5.3	33.9	1	2.61	21,635	5.9	42.0	1	2.61	16,816	6.8	48.8	1	2.82	3,894	4.1	37.1	1	2.82	30,426	6.7	37.3	1	2.82	30,426	6.7	37.3	1	2.82	30,426	6.7	37.3	1															
6	17,645	9.5	43.2	1	2.67	13,013	5.4	48.0	1	2.67	6,294	3.5	50.1	1	2.92	4,270	2.7	40.8	1	2.92	17,320	2.1	42.4	1	2.92	17,320	2.1	42.4	1	2.92	17,320	2.1	42.4	1															
7	6,072	3.3	46.5	1	2.68	9,097	1.4	50.3	1	2.68	14,816	2.2	52.3	1	2.95	3,703	2.7	43.5	1	2.95	63,847	7.7	50.1	1	2.95	63,847	7.7	50.1	1	2.95	63,847	7.7	50.1	1															
8	14,789	7.9	54.4	1	2.70	3,897	1.7	52.3	1	2.70	16,147	2.2	54.8	1	2.97	4,270	2.7	45.2	1	2.97	152,909	22.1	72.2	1	2.97	152,909	22.1	72.2	1	2.97	152,909	22.1	72.2	1															
9	3,637	2.0	56.4	1	2.70	3,687	1.4	54.8	1	2.70	14,147	3.5	58.3	1	2.98	4,270	2.7	46.9	1	2.98	81,976	3.8	76.0	1	2.98	81,976	3.8	76.0	1	2.98	81,976	3.8	76.0	1															
10	4,473	2.3	58.7	1	2.70	3,687	1.4	57.1	1	2.70	14,816	3.5	60.0	1	3.00	4,270	2.7	48.0	1	3.00	114,046	1.8	77.8	1	3.00	114,046	1.8	77.8	1	3.00	114,046	1.8	77.8	1															
11	11,661	2.6	61.3	1	3.05	2,998	1.4	61.9	1	3.05	9,101	4.1	63.5	1	3.11	16,995	1.3	81.0	1	3.11	16,995	1.3	81.0	1	3.11	16,995	1.3	81.0	1	3.11	16,995	1.3	81.0	1															
12	3,478	2.3	63.2	1	3.11	4,012	1.8	63.7	1	3.11	11,237	2.3	65.8	1	3.16	14,944	2.4	83.4	1	3.16	14,944	2.4	83.4	1	3.16	14,944	2.4	83.4	1	3.16	14,944	2.4	83.4	1															
13	5,606	2.3	65.6	1	3.19	4,449	2.0	65.9	1	3.19	3,626	2.4	68.2	1	3.22	35,841	1.3	85.8	1	3.22	35,841	1.3	85.8	1	3.22	35,841	1.3	85.8	1	3.22	35,841	1.3	85.8	1															
14	7,511	4.0	69.5	1	3.22	5,323	2.4	69.4	1	3.22	6,223	2.4	71.8	1	3.26	14,751	1.3	88.2	1	3.26	14,751	1.3	88.2	1	3.26	14,751	1.3	88.2	1	3.26	14,751	1.3	88.2	1															
15	2,095	1.1	70.6	1	3.30	4,105	1.8	72.4	1	3.30	7,454	2.4	74.8	1	3.40	32,031	2.9	90.6	1	3.40	32,031	2.9	90.6	1	3.40	32,031	2.9	90.6	1	3.40	32,031	2.9	90.6	1															
16	4,044	1.4	72.0	1	4.04	7,454	2.4	76.8	1	4.04	7,454	2.4	78.2	1	4.04	32,031	2.9	92.0	1	4.04	32,031	2.9	92.0	1	4.04	32,031	2.9	92.0	1	4.04	32,031	2.9	92.0	1															
17	2,765	1.1	73.1	1	4.04	7,454	2.4	78.2	1	4.04	7,454	2.4	79.6	1	4.04	32,031	2.9	93.4	1	4.04	32,031	2.9	93.4	1	4.04	32,031	2.9	93.4	1	4.04	32,031	2.9	93.4	1															
18	3,397	1.4	74.5	1	4.04	7,454	2.4	80.0	1	4.04	7,454	2.4	81.4	1	4.04	32,031	2.9	94.8	1	4.04	32,031	2.9	94.8	1	4.04	32,031	2.9	94.8	1	4.04	32,031	2.9	94.8	1															
19	4,863	2.6	76.0	1	4.04	7,454	2.4	81.4	1	4.04	7,454	2.4	82.8	1	4.04	32,031	2.9	96.2	1	4.04	32,031	2.9	96.2	1	4.04	32,031	2.9	96.2	1	4.04	32,031	2.9	96.2	1															
20	11,661	2.6	77.0	1	4.04	7,454	2.4	82.8	1	4.04	7,454	2.4	84.2	1	4.04	32,031	2.9	97.6	1	4.04	32,031	2.9	97.6	1	4.04	32,031	2.9	97.6	1	4.04	32,031	2.9	97.6	1															
21	2,972	1.1	78.1	1	4.04	7,454	2.4	84.2	1	4.04	7,454	2.4	85.6	1	4.04	32,031	2.9	99.0	1	4.04	32,031	2.9	99.0	1	4.04	32,031	2.9	99.0	1	4.04	32,031	2.9	99.0	1															
22	3,397	1.4	79.4	1	4.04	7,454	2.4	85.6	1	4.04	7,454	2.4	87.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
23	4,863	2.6	80.0	1	4.04	7,454	2.4	87.0	1	4.04	7,454	2.4	88.4	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
24	11,661	2.6	81.4	1	4.04	7,454	2.4	88.4	1	4.04	7,454	2.4	89.8	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
25	3,397	1.4	82.8	1	4.04	7,454	2.4	89.8	1	4.04	7,454	2.4	91.2	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
26	4,863	2.6	84.2	1	4.04	7,454	2.4	91.2	1	4.04	7,454	2.4	92.6	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
27	3,397	1.4	85.6	1	4.04	7,454	2.4	92.6	1	4.04	7,454	2.4	94.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
28	4,863	2.6	87.0	1	4.04	7,454	2.4	94.0	1	4.04	7,454	2.4	95.4	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
29	11,661	2.6	88.4	1	4.04	7,454	2.4	95.4	1	4.04	7,454	2.4	96.8	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
30	3,397	1.4	89.8	1	4.04	7,454	2.4	96.8	1	4.04	7,454	2.4	98.2	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
31	4,863	2.6	91.2	1	4.04	7,454	2.4	98.2	1	4.04	7,454	2.4	99.6	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
32	3,397	1.4	92.6	1	4.04	7,454	2.4	99.6	1	4.04	7,454	2.4	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
33	4,863	2.6	94.0	1	4.04	7,454	2.4	100.0	1	4.04	7,454	2.4	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
34	11,661	2.6	95.4	1	4.04	7,454	2.4	100.0	1	4.04	7,454	2.4	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
35	3,397	1.4	96.8	1	4.04	7,454	2.4	100.0	1	4.04	7,454	2.4	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
36	4,863	2.6	98.2	1	4.04	7,454	2.4	100.0	1	4.04	7,454	2.4	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1															
37	3,397	1.4	99.6	1	4.04	7,454	2.4	100.0	1	4.04	7,454	2.4	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	100.0	1	4.04	32,031	2.9	10																					

TABLE 10.—Total sales realization, by quarterly and yearly periods for 21 operators producing bituminous coal in District No. 2 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01															
32.60	5,903	2.4	3.2	1	32.04	19,237	8.7	8.7	1	33.06	7,119	2.9	2.9	1	32.78	5,391	3.1	3.1	1	32.78	5,391	3.1	3.1	1	32.78	5,391	3.1	3.1	1	32.78	5,391	3.1	3.1	1															
22.75	15,673	8.4	11.6	1	34.04	14,421	6.5	15.2	2	34.15	10,932	4.4	7.3	2	34.24	5,996	2.4	5.7	3	34.24	5,996	2.4	8.1	3	34.24	5,996	2.4	8.1	3	34.24	5,996	2.4	11.0	4															
22.99	6,174	3.3	14.9	1	34.07	2,988	1.4	16.6	1	34.26	29,380	9.1	16.4	1	34.33	3,734	2.3	2.4	1	34.33	3,734	2.3	2.4	1	34.33	3,734	2.3	2.4	1	34.33	3,734	2.3	11.0	4															
33.00	6,092	3.3	18.2	1	34.09	3,867	1.7	31.7	1	34.38	3,490	1.3	17.8	1	34.46	16,832	9.5	26.9	2	34.46	16,832	9.5	26.9	2	34.46	16,832	9.5	26.9	2	34.46	16,832	9.5	13.8	5															
33.14	17,645	9.4	27.6	1	34.33	3,867	1.7	33.4	1	34.46	3,490	1.3	19.1	1	34.53	4,232	2.4	30.5	3	34.53	4,232	2.4	30.5	3	34.53	4,232	2.4	30.5	3	34.53	4,232	2.4	17.9	6															
33.24	18,837	10.0	37.6	1	34.42	29,311	10.1	42.5	1	34.59	4,977	2.0	32.0	1	34.66	13,441	7.7	37.6	4	34.66	13,441	7.7	37.6	4	34.66	13,441	7.7	37.6	4	34.66	13,441	7.7	20.1	7															
33.40	5,081	2.7	40.3	1	34.56	19,311	8.7	51.2	1	34.73	6,748	2.9	34.5	1	34.80	9,713	4.4	39.0	2	34.80	9,713	4.4	39.0	2	34.80	9,713	4.4	39.0	2	34.80	9,713	4.4	23.1	8															
33.53	2,202	1.2	41.5	1	34.80	40,945	18.5	69.7	1	34.84	60,226	24.5	59.0	1	34.91	13,441	7.7	46.5	5	34.91	13,441	7.7	46.5	5	34.91	13,441	7.7	46.5	5	34.91	13,441	7.7	25.1	9															
33.66	5,132	2.8	44.3	1	34.91	30,500	13.6	83.3	1	34.96	4,456	1.9	60.9	1	35.03	9,713	4.4	51.4	6	35.03	9,713	4.4	51.4	6	35.03	9,713	4.4	51.4	6	35.03	9,713	4.4	26.1	10															
33.86	19,133	10.2	50.2	1	35.03	11,287	5.1	90.2	1	35.06	16,815	6.8	67.7	1	35.13	9,713	4.4	55.5	7	35.13	9,713	4.4	55.5	7	35.13	9,713	4.4	55.5	7	35.13	9,713	4.4	28.1	11															
33.99	10,580	5.9	56.2	1	35.13	4,107	1.8	91.5	1	35.16	7,710	3.1	71.8	1	35.23	9,713	4.4	59.8	8	35.23	9,713	4.4	59.8	8	35.23	9,713	4.4	59.8	8	35.23	9,713	4.4	30.1	12															
34.20	11,537	1.9	62.3	1	35.23	9,101	4.1	93.3	1	35.26	4,559	1.9	73.7	1	35.33	9,713	4.4	63.7	9	35.33	9,713	4.4	63.7	9	35.33	9,713	4.4	63.7	9	35.33	9,713	4.4	31.1	13															
34.72	11,041	6.3	68.6	1	35.33	4,012	1.8	94.9	1	35.36	5,585	2.3	76.0	1	35.43	11,790	6.7	66.4	10	35.43	11,790	6.7	66.4	10	35.43	11,790	6.7	66.4	10	35.43	11,790	6.7	32.1	14															
35.23	37,504	20.1	88.7	1	35.71	5,238	2.4	96.3	1	35.84	8,589	3.5	79.5	1	35.91	3,946	2.2	81.9	11	35.91	3,946	2.2	81.9	11	35.91	3,946	2.2	81.9	11	35.91	3,946	2.2	33.1	15															
35.37	7,221	4.0	92.7	1	35.84	22,983	9.3	99.3	1	35.96	5,911	1.6	81.4	1	36.03	4,977	2.0	83.9	12	36.03	4,977	2.0	83.9	12	36.03	4,977	2.0	83.9	12	36.03	4,977	2.0	34.1	16															
35.83	2,693	1.4	94.1	1	36.03	4,464	2.4	99.7	1	36.10	3,911	1.6	83.4	1	36.17	9,713	4.4	85.3	13	36.17	9,713	4.4	85.3	13	36.17	9,713	4.4	85.3	13	36.17	9,713	4.4	35.1	17															
36.37	2,478	2.6	97.0	1	36.17	10,082	4.1	99.8	1	36.23	5,082	2.1	85.5	1	36.30	9,713	4.4	87.4	14	36.30	9,713	4.4	87.4	14	36.30	9,713	4.4	87.4	14	36.30	9,713	4.4	36.1	18															
4.31	5,606	2.0	100.0	1	36.34	16,147	7.3	100.0	1	36.37	5,314	2.4	86.6	1	36.43	8,314	3.4	89.8	15	36.43	8,314	3.4	89.8	15	36.43	8,314	3.4	89.8	15	36.43	8,314	3.4	37.1	19															
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....															
3.48	196,581	100.0	100.0	21	3.43	291,564	100.0	100.0	21	3.43	246,001	100.0	100.0	21	3.32	175,182	100.0	100.0	21	3.32	175,182	100.0	100.0	21	3.32	175,182	100.0	100.0	21	3.42	829,331	100.0	100.0	21															

TABLE 11.—Total "Revised" labor cost, by quarterly and yearly periods for 1918, for 39 operators producing bituminous coal in District No. 3 of the State of Ohio.

January-March, 1918, inclusive.							April-June, 1918, inclusive.							July-September, 1918, inclusive.							October-December, 1918, inclusive.							Year 1918.						
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.					
1.12	4,561	0.2	0.2	1	\$1.14	13,852	0.6	0.6	1	\$1.16	66,410	2.8	2.8	1	\$1.20	46,797	2.8	2.8	1	\$1.22	198,603	2.4	2.4	1	\$1.26	362,545	2.4	2.4	1	1				
1.21	27,207	3.4	4.9	2	1.16	53,744	2.3	2.9	2	1.20	74,310	3.1	5.9	2	1.28	47,546	3.1	5.6	2	1.30	496,037	5.3	5.3	2	1.30	496,037	5.3	5.3	2	2				
1.25	62,687	8.4	13.6	2	1.19	40,434	1.7	4.6	2	1.21	16,128	0.8	6.6	2	1.30	27,529	1.6	7.2	2	1.31	865,110	9.4	9.4	2	1.31	865,110	9.4	9.4	2	3				
1.26	33,066	1.8	6.7	2	1.20	65,645	2.8	7.4	2	1.22	18,122	0.8	7.8	2	1.32	51,209	3.0	10.2	2	1.32	2,620,770	24.4	24.4	2	1.32	2,620,770	24.4	24.4	2	4				
1.27	26,290	1.4	8.1	2	1.22	11,062	0.5	7.9	2	1.23	8,838	0.4	8.3	2	1.34	15,144	0.7	11.3	2	1.33	115,539	1.4	48.6	2	1.33	115,539	1.4	48.6	2	5				
1.28	631,726	33.5	41.6	3	1.24	77,526	3.3	11.2	3	1.24	12,783	0.6	9.9	3	1.35	4,026	0.2	11.3	3	1.33	1,117,590	13.1	13.1	3	1.33	1,117,590	13.1	63.9	3	6				
1.29	5,690	0.3	43.8	3	1.26	815,039	35.0	46.2	3	1.30	38,187	1.6	9.9	3	1.36	8,953	0.4	47.7	3	1.34	1,117,590	13.1	13.1	3	1.34	1,117,590	13.1	63.9	3	7				
1.33	36,546	1.9	43.8	3	1.27	31,818	1.4	47.6	3	1.31	79,773	3.3	13.2	3	1.40	52,503	3.0	50.7	3	1.37	60,047	0.7	0.7	3	1.37	60,047	0.7	64.5	3	8				
1.34	326,862	17.3	61.1	3	1.29	321,105	13.8	61.4	3	1.32	801,222	13.2	60.0	3	1.43	10,937	1.2	51.9	3	1.40	1,117,590	13.1	13.1	3	1.42	20,971	0.3	64.8	3	9				
1.36	47,766	2.2	63.6	3	1.31	33,833	1.5	62.6	3	1.34	315,365	1.4	61.4	3	1.47	255,050	13.7	65.6	3	1.45	76,599	0.4	65.7	3	1.46	76,599	0.4	65.7	3	10				
1.44	4,339	0.2	63.8	3	1.33	39,846	1.7	64.9	3	1.36	33,968	1.4	64.4	3	1.50	15,181	0.8	66.5	3	1.49	230,803	2.8	68.5	3	1.49	230,803	2.8	68.5	3	11				
1.45	41,168	2.1	65.9	3	1.35	7,571	0.3	66.3	3	1.37	24,791	1.0	62.4	3	1.53	10,937	1.2	67.4	3	1.50	34,556	0.2	69.1	3	1.50	34,556	0.2	69.1	3	12				
1.46	123,608	6.6	72.5	3	1.37	33,039	1.4	66.3	3	1.39	24,339	1.3	65.3	3	1.54	10,232	0.6	67.4	3	1.53	1,117,590	13.1	13.1	3	1.54	1,117,590	13.1	69.1	3	13				
1.48	10,432	0.6	73.1	3	1.44	48,390	2.1	68.4	3	1.40	24,339	1.3	65.3	3	1.54	10,232	0.6	67.4	3	1.56	463,665	5.5	74.6	3	1.56	463,665	5.5	74.6	3	14				
1.50	25,610	1.4	74.5	3	1.45	4,609	0.2	69.0	3	1.42	4,184	0.2	65.7	3	1.55	15,181	0.8	67.4	3	1.56	175,289	21.5	88.2	3	1.56	175,289	21.5	88.2	3	15				
1.52	11,899	0.6	75.3	3	1.47	4,609	0.2	69.0	3	1.46	13,277	0.6	66.3	3	1.60	15,181	0.8	67.4	3	1.58	959,439	21.5	88.2	3	1.58	959,439	21.5	88.2	3	16				
1.53	3,546	0.2	75.3	3	1.48	44,514	1.9	70.9	3	1.46	13,277	0.6	66.3	3	1.60	15,181	0.8	67.4	3	1.61	87,549	11.5	89.3	3	1.61	87,549	11.5	89.3	3	17				
1.54	7,532	0.4	75.7	3	1.49	5,392	0.2	71.1	3	1.49	15,888	0.7	67.0	3	1.65	8,925	0.4	84.3	3	1.63	28,223	3.4	90.6	3	1.63	28,223	3.4	90.6	3	18				
1.57	26,305	1.4	77.1	3	1.50	25,068	1.1	72.2	3	1.52	42,750	1.8	68.8	3	1.69	6,370	0.3	89.3	3	1.65	32,889	1.2	91.2	3	1.65	32,889	1.2	91.2	3	19				
1.59	263,171	13.5	90.6	3	1.51	20,168	0.9	73.1	3	1.53	129,921	5.4	74.8	3	1.73	18,416	1.1	85.8	3	1.69	99,150	2.6	94.8	3	1.69	99,150	2.6	94.8	3	20				
1.65	66,300	3.6	94.8	3	1.52	5,381	0.2	73.3	3	1.57	129,921	5.4	74.8	3	1.73	18,416	1.1	85.8	3	1.72	216,254	2.6	94.8	3	1.72	216,254	2.6	94.8	3	21				
1.66	13,854	0.6	94.8	3	1.53	7,045	0.3	73.6	3	1.60	326,932	13.7	88.5	3	1.82	4,070	0.2	89.3	3	1.77	42,769	2.6	94.8	3	1.77	42,769	2.6	94.8	3	22				
1.71	19,086	1.0	95.8	3	1.57	134,934	5.8	79.4	3	1.63	24,791	1.0	89.0	3	1.86	16,408	0.9	90.5	3	1.80	61,983	0.8	90.5	3	1.80	61,983	0.8	90.5	3	23				
1.72	10,521	0.5	96.4	3	1.58	31,579	1.4	80.8	3	1.66	11,046	0.5	91.0	3	1.91	15,932	0.9	91.4	3	1.87	38,530	0.5	94.9	3	1.87	38,530	0.5	94.9	3	24				
1.77	3,170	0.2	97.2	3	1.59	249,849	10.7	91.5	3	1.67	76,067	2.8	94.2	3	1.94	15,932	0.9	91.4	3	1.91	1,117,590	13.1	13.1	3	1.91	1,117,590	13.1	69.1	3	25				
1.78	13,036	0.7	97.9	3	1.68	62,579	2.7	94.8	3	1.70	18,890	0.8	95.0	3	1.94	15,932	0.9	91.4	3	1.94	1,117,590	13.1	13.1	3	1.94	1,117,590	13.1	69.1	3	26				

2.02	14,145	7	98.6	1	1.40	36,235	1.6	96.4	1	1.83	14,269	6	95.6	1	2.07	9,734	6	94.1	1	1.98	52,131	6	98.7	1
2.03	11,600	6	99.2	1	1.70	12,305	5	98.9	1	1.88	21,856	1.0	98.6	1	2.13	10,904	6	94.7	1	2.03	30,546	6	99.2	1
2.15	12,594	7	99.0	1	1.75	20,922	9	97.8	1	2.02	41,027	1.0	98.5	1	2.17	6,360	4	95.1	1	2.20	48,538	6	99.8	1
2.55	1,498	1	100.0	1	1.67	10,222	4	98.2	1	2.07	11,315	5	98.5	1	2.18	7,734	5	95.6	1	2.21	17,521	2	100.0	1
.....	.....	.....	.....	.....	.....	12,075	5	98.7	1	2.30	6,495	3	99.3	1	2.33	32,014	1.9	97.5	1	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	12,941	2	98.9	1	2.31	6,728	3	99.3	1	2.33	11,056	1.6	96.1	1	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	12,390	5	99.4	1	2.39	10,937	5	100.0	1	2.30	5,279	3	98.4	1	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	9,853	3	99.8	1	.....	.....	.....	.....	.....	2.38	4,020	3	98.7	1	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	4,046	2	100.0	1	.....	.....	.....	.....	.....	2.39	23,197	1.3	100.0	1	.....	.....	.....	.....	.....
1.41	1,867,233	100.0	100.0	39	1.35	2,330,362	100.0	100.0	39	1.43	2,385,475	100.0	100.0	39	1.54	1,718,212	100.0	100.0	39	1.43	8,321,282	100.0	100.0	39



TABLE 13.—Total "Revised" general expenses, by quarterly and yearly periods for 1918, for 39 operators producing bituminous coal in District No. 3 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.																																																																																																																																																																																																																																																																																													
Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	Accumulated per cent.	Number of oper- ators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton- nage (net tons).	Per cent of total.	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## COST REPORTS OF FEDERAL TRADE COMMISSION.

TABLE 14.—Total "Revised" f. o. b. mine cost, by quarterly and yearly periods for 1918, for 39 operators producing bituminous coal in District No. 3 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.				
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.															
\$1.48	4,561	0.2	0.2	1	\$1.53	105,531	4.5	4.5	2	\$1.53	74,310	3.1	3.1	1	\$1.45	48,797	2.8	2.8	1	\$1.95	163,548	2.0	2.0	2	2.0	163,548	2.0	2.0	2	2.0														
1.58	36,546	1.9	2.1	1	1.59	53,744	2.3	6.8	1	1.56	18,122	.8	3.9	1	1.77	47,546	2.8	5.6	1	1.66	188,603	4.4	39.0	1	4.4	188,603	34.6	39.0	1	4.4														
1.64	27,771	1.5	3.6	1	1.60	833,666	35.8	42.6	3	1.58	66,410	2.8	6.7	1	1.83	4,026	2.8	5.8	1	1.68	2,882,960	24.6	63.6	1	24.6	2,882,960	64.6	63.6	1	24.6														
1.66	631,726	33.5	37.0	1	1.69	33,833	1.5	44.1	1	1.63	801,229	33.6	40.3	1	1.91	15,144	35.9	41.7	1	1.70	223,903	2.7	43.1	1	2.7	223,903	2.7	43.1	1	2.7														
1.71	26,260	1.4	38.5	1	1.72	77,526	3.3	47.4	1	1.68	229,322	31.6	41.9	1	1.91	15,144	35.9	41.7	1	1.74	115,539	1.7	44.8	1	1.74	115,539	1.7	44.8	1	1.74														
1.77	62,687	3.3	41.8	1	1.74	31,818	1.4	48.8	1	1.75	16,128	.7	42.6	1	1.94	51,209	3.0	42.6	1	1.82	60,047	4.0	48.4	1	4.0	60,047	4.0	48.4	1	4.0														
1.81	30,903	1.6	43.4	1	1.76	48,390	2.1	50.9	1	1.76	35,968	1.4	44.0	1	1.95	21,940	1.3	46.8	1	1.83	377,937	1.7	61.8	1	1.83	377,937	1.7	61.8	1	1.83														
1.82	36,398	1.9	45.3	1	1.78	33,988	1.4	52.4	1	1.78	77,773	3.3	47.3	1	2.00	16,184	.9	49.0	1	1.90	117,500	13.4	61.8	1	13.4	117,500	13.4	61.8	1	13.4														
1.83	28,010	1.4	46.7	1	1.80	329,853	14.2	66.6	2	1.81	13,119	2.5	48.9	1	2.09	18,184	1.3	49.0	1	1.91	175,268	2.0	63.9	1	2.0	175,268	2.0	63.9	1	2.0														
1.84	49,308	2.6	50.0	2	1.83	25,546	1.3	60.4	1	1.83	321,546	13.4	63.8	2	2.11	5,863	.9	49.5	1	1.90	117,500	13.4	61.8	1	1.90	117,500	13.4	61.8	1	1.90														
1.88	13,176	.7	62.1	1	1.85	25,625	1.1	68.2	1	1.84	4,194	.2	64.4	1	2.12	27,529	1.6	54.1	1	2.01	76,569	.4	66.3	1	2.01	76,569	.4	66.3	1	2.01														
1.89	10,432	.6	63.5	1	1.87	7,413	.3	68.5	1	1.84	4,194	.2	64.4	1	2.14	27,529	1.6	54.1	1	2.03	161,523	2.0	69.2	1	2.03	161,523	2.0	69.2	1	2.03														
1.94	32,719	1.7	65.1	1	1.89	44,514	1.9	70.9	1	1.87	8,838	.4	64.4	1	2.19	213,110	12.4	66.5	2	2.04	27,774	.3	69.5	1	2.04	27,774	.3	69.5	1	2.04														
1.97	3,546	.2	65.3	1	1.91	11,055	.4	71.2	1	1.88	24,791	1.0	65.4	1	2.20	23,339	1.4	67.9	2	2.07	54,266	.4	69.9	1	2.07	54,266	.4	69.9	1	2.07														
1.98	13,711	1.0	66.3	1	1.93	7,571	.3	71.5	1	1.89	38,187	1.6	67.0	1	2.22	20,339	1.6	68.5	2	2.07	54,266	.4	69.9	1	2.07	54,266	.4	69.9	1	2.07														
2.00	149,218	8.0	74.3	2	2.03	7,045	.3	71.5	1	1.90	25,400	1.1	68.1	1	2.22	227,663	13.3	68.5	2	2.09	77,865	.9	70.8	1	2.09	77,865	.9	70.8	1	2.09														
2.01	5,813	.3	74.6	1	2.06	9,113	.4	71.9	1	1.91	13,673	.9	68.7	1	2.26	35,831	2.1	81.8	2	2.13	869,439	11.5	82.3	1	2.13	869,439	11.5	82.3	1	2.13														
2.02	3,884	.2	75.8	1	2.09	249,849	10.7	82.6	1	1.95	9,600	.4	69.1	1	2.36	32,403	1.9	83.9	1	2.14	19,098	.8	82.5	1	2.14	19,098	.8	82.5	1	2.14														
2.03	21,984	1.2	75.8	1	2.11	31,579	1.4	84.0	1	1.98	6,543	.2	69.3	1	2.41	4,652	.3	86.1	1	2.17	45,155	.6	83.1	1	2.17	45,155	.6	83.1	1	2.17														
2.08	38,198	12.1	89.9	2	2.19	36,235	1.6	85.6	1	2.01	42,750	1.8	71.1	1	2.41	18,416	.9	87.2	1	2.21	28,223	.3	83.4	1	2.21	28,223	.3	83.4	1	2.21														
2.10	5,813	.5	90.4	2	2.20	5,382	.2	85.8	1	2.04	11,046	.5	71.6	1	2.55	15,832	.9	89.1	1	2.27	43,359	6.3	88.7	1	2.27	43,359	6.3	88.7	1	2.27														
2.11	8,763	.7	91.1	1	2.22	5,381	.2	86.0	1	2.11	259,244	10.9	82.5	1	2.64	16,406	.9	89.0	1	2.27	43,359	6.3	88.7	1	2.27	43,359	6.3	88.7	1	2.27														
2.12	66,300	3.5	94.6	2	2.25	26,879	2.7	86.8	1	2.17	129,921	6.2	87.9	2	2.66	6,504	.4	90.4	2	2.28	99,160	1.2	91.1	1	2.28	99,160	1.2	91.1	1	2.28														
2.17	13,864	.6	95.2	1	2.30	62,877	2.7	88.8	1	2.17	30,899	1.3	89.2	1	2.67	4,670	.4	90.4	2	2.33	99,160	1.2	91.1	1	2.33	99,160	1.2	91.1	1	2.33														
2.24	10,521	.6	95.4	1	2.32	33,227	1.4	91.8	2	2.24	4,569	.2	89.4	1	2.68	6,370	.4	90.4	2	2.39	139,633	1.1	92.8	1	2.39	139,633	1.1	92.8	1	2.39														
2.25	1,179	.1	95.5	1	2.33	14,314	.6	91.8	1	2.24	13,277	.6	89.4	1	2.74	3,869	.2	93.1	1	2.41	87,549	1.1	93.9	1	2.41	87,549	1.1	93.9	1	2.41														
2.26	1,179	.1	95.5	1	2.34	14,314	.6	91.8	1	2.26	13,277	.6	89.4	1	2.74	3,869	.2	93.1	1	2.41	87,549	1.1	93.9	1	2.41	87,549	1.1	93.9	1	2.41														
2.35	4,909	1.2	97.2	1	2.35	4,909	1.2	97.2	1	2.35	12,189	.5	90.3	1	2.75	9,734	.6	95.0	1	2.48	216,254	2.0	97.4	1	2.48	216,254	2.0	97.4	1	2.48														
2.45	19,086	1.0	97.2	1	2.45	134,934	5.8	97.8	1	2.38	12,189	.5	90.3	1	2.75	9,734	.6	95.0	1	2.51	216,254	2.0	97.4	1	2.51	216,254	2.0	97.4	1	2.51														

2.62	14,145	.7	97.9	1	2.56	12,075	.5	98.3	1	2.37	63,878	2.7	94.0	1	2.91	5,906	.3	93.9	1	2.57	51,953	.6	97.6	1
2.66	13,636	.7	98.6	1	2.58	10,222	.4	98.7	1	2.39	24,979	1.0	95.0	1	3.06	1,458	.1	96.0	1	2.60	38,530	.5	98.1	1
2.63	11,600	.6	99.2	1	2.62	4,901	.2	98.9	1	2.44	14,269	1.6	95.6	1	3.15	4,626	.3	96.3	1	2.76	52,131	.6	98.7	1
2.92	12,594	.7	99.9	1	2.73	4,046	.2	99.1	1	2.49	44,927	1.9	97.5	1	3.16	10,804	.6	96.9	1	2.79	17,521	.2	98.9	1
5.36	1,498	.1	100.0	1	2.77	12,390	.5	99.6	1	2.62	24,856	1.0	98.5	1	3.17	7,754	.5	97.4	1	2.86	36,546	.5	99.4	1
.....	.....	.....	.....	.....	3.05	9,853	.4	100.0	1	2.81	4,728	.2	98.7	1	3.25	5,279	.3	97.7	1	2.95	45,528	.6	100.0	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.90	11,355	.5	99.2	1	3.20	6,369	.4	98.1	1	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.20	10,937	.5	99.7	1	3.32	11,056	.4	98.7	1	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.24	6,695	.3	100.0	1	4.16	23,197	1.3	100.0	1	.....	.....	.....	.....	.....
1.83	1,887,233	100.0	100.0	39	1.86	2,330,362	100.0	100.0	39	1.88	2,385,475	100.0	100.0	39	2.13	1,718,212	100.0	100.0	39	1.93	8,321,262	100.0	100.0	39





TABLE 16.—Total "Revised" labor cost, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in District No. 3c of the State of Ohio.

January-March, 1918, inclusive.					April-June, 1918, inclusive.					July-September, 1918, inclusive.					October-December, 1918, inclusive.					Year 1918.					
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 grouping.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
\$1.14	13,549	20.9	20.9	1	\$1.15	13,549	18.3	18.3	1	\$1.23	12,052	16.3	16.3	1	\$1.18	7,445	11.8	11.8	1	\$1.19	45,418	45,418	16.5	16.5	1
1.21	8,098	12.5	33.4	2	1.22	8,501	11.5	29.8	1	1.32	10,875	14.7	31.0	1	1.26	8,350	13.2	25.0	1	1.24	37,027	37,027	13.4	29.9	1
1.27	13,931	21.5	54.9	3	1.40	13,543	18.3	48.1	1	1.52	4,093	6.5	36.5	1	1.05	5,546	8.7	33.7	1	1.51	28,469	28,469	10.5	40.3	1
1.44	11,152	17.2	72.1	4	1.48	8,278	11.2	59.3	1	1.69	6,096	8.2	48.7	1	1.06	15,099	23.9	57.6	2	1.60	11,015	11,015	4.2	44.4	1
1.60	5,650	8.2	80.3	5	1.53	6,017	8.2	67.5	1	1.73	5,375	7.5	56.2	1	1.86	10,394	16.4	74.0	1	1.72	43,880	43,880	15.9	60.3	1
1.83	5,313	8.2	88.5	6	1.54	2,913	3.9	71.4	1	1.78	8,420	11.4	67.6	2	1.86	1,640	2.2	79.1	1	1.74	31,733	31,733	11.5	68.8	1
2.01	5,046	9.2	98.7	7	1.67	7,221	9.8	81.2	1	2.04	9,077	13.1	80.7	2	1.92	2,533	3.4	83.6	1	1.85	8,902	8,902	3.2	96.8	1
2.01	5,046	1.3	100.0	8	2.34	7,559	10.6	91.7	1	2.40	6,446	7.4	100.0	1	2.54	3,046	4.8	100.0	1	2.22	2,222	2,222	3.2	100.0	1
1.46	64,765	100.0	100.0	10	1.47	72,872	100.0	100.0	10	1.69	73,865	100.0	100.0	10	1.70	63,277	100.0	100.0	10	1.58	276,909	276,909	100.0	100.0	10

COAL

TABLE 17.—Total "Revised" supply cost, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in District No. 3a of the State of Ohio.

January-March, 1918, inclusive.						April-June, 1918, inclusive.						July-September, 1918, inclusive.						October-December, 1918, inclusive.						Year 1918.						
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
\$0.06	2,660	4.1	4.1	1	\$0.06	2,913	2.9	2.9	1	\$0.05	4,082	5.5	5.5	1	\$0.09	1,990	3.1	3.1	1	\$0.09	1,990	11,615	4.2	4.2	1	\$0.07	11,615	4.2	4.2	1
.13	8,124	12.5	16.6	1	.09	6,017	8.2	12.1	1	.14	8,420	11.4	16.9	1	.19	9,218	14.6	17.7	1	.19	9,218	30,172	10.9	15.1	1	.18	30,172	10.9	15.1	1
.15	8,068	12.5	29.1	1	.11	8,501	11.5	23.6	1	.17	6,286	8.4	26.3	1	.23	10,494	16.6	34.3	2	.23	10,494	86,809	31.1	46.2	3	.20	86,809	31.1	46.2	3
.20	5,313	8.2	37.3	1	.16	8,278	11.2	34.8	1	.18	10,875	14.7	40.0	1	.23	5,546	8.7	43.0	2	.23	5,546	46,418	16.5	62.7	1	.27	46,418	16.5	62.7	1
.21	3,278	5.1	42.4	1	.21	20,770	28.1	62.9	2	.19	5,446	7.4	47.4	1	.30	10,364	16.4	59.4	1	.30	10,364	18,430	6.7	69.4	1	.33	18,430	6.7	69.4	1
.27	13,549	20.9	63.3	1	.28	4,031	5.5	68.4	1	.21	12,052	16.3	63.7	1	.36	6,881	9.3	68.7	1	.36	6,881	43,530	15.9	85.3	1	.38	43,530	15.9	85.3	1
.28	5,807	9.0	72.3	1	.30	13,543	18.3	86.7	1	.27	6,575	7.5	71.2	1	.37	8,350	13.2	81.9	1	.37	8,350	8,902	2.2	88.5	1	.67	8,902	2.2	88.5	1
.48	11,152	17.2	89.5	1	.35	7,869	10.6	97.3	1	.47	8,772	11.9	83.1	1	.52	2,532	4.0	86.9	1	.52	2,532	31,733	11.5	100.0	1	.67	31,733	11.5	100.0	1
.57	5,946	9.2	98.7	1	.68	1,961	2.7	100.0	1	.92	8,996	12.2	100.0	1	.77	8,932	14.1	100.0	1	.77	8,932	.....	.....	.....	.....	.....	.....	.....	.....	.....
.82	893	1.3	100.0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.29	64,765	100.0	100.0	10	.23	73,872	100.0	100.0	10	.32	73,866	100.0	100.0	10	.36	63,277	100.0	100.0	10	.36	63,277	275,809	100.0	100.0	10	.29	275,809	100.0	100.0	10

## COAL.

TABLE 18.—Total "Revised" general expenses, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in District No. 3a of the State of Ohio.

January-March, 1918, inclusive.					April-June, 1918, inclusive.					July-September, 1918, inclusive.					October-December, 1918, inclusive.					Year 1918.					
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
\$0.12	5,807	9.0	9.0	1	\$0.23	6,017	8.2	8.2	1	\$0.15	5,446	7.4	7.4	1	\$0.23	3,049	4.8	4.8	1	\$0.18	20,319	7.4	7.4	7.4	1
.27	8,068	12.5	21.5	1	.31	13,542	18.3	26.5	1	.36	8,996	12.2	19.6	2	.34	19,296	30.5	35.3	2	.31	31,733	11.5	18.9	11.5	1
.29	11,152	17.2	38.7	1	.32	16,137	21.8	48.3	2	.38	23,863	32.2	51.8	3	.34	5,516	8.7	44.0	2	.33	31,733	13.5	31.8	13.5	1
.30	5,946	9.2	47.9	1	.37	13,549	18.3	66.6	1	.41	10,875	14.7	66.5	1	.44	8,350	13.2	57.2	1	.35	28,463	10.3	45.1	10.3	1
.36	13,540	20.9	68.8	1	.39	4,031	6.5	72.1	1	.43	8,572	11.9	78.4	1	.48	6,881	9.3	66.5	1	.38	18,430	16.5	61.8	16.5	1
.42	3,278	6.1	73.9	1	.46	8,501	11.5	83.6	1	.47	4,082	5.5	83.9	1	.62	7,445	11.8	78.3	1	.42	45,418	16.5	68.3	16.5	1
.48	8,124	12.5	86.4	1	.59	2,913	3.9	87.5	1	.53	3,441	4.7	88.6	1	.81	1,960	3.1	81.4	1	.43	37,027	13.4	81.7	13.4	1
.60	2,660	4.1	90.5	1	.72	1,961	2.7	90.2	1	.85	8,420	11.4	100.0	1	.92	9,218	14.6	96.0	1	.59	11,615	4.2	88.9	4.2	1
.87	5,313	8.2	98.7	1	.80	7,221	9.8	100.0	1	1.40	2,532	4.0	100.0	1	1.40	2,532	4.0	100.0	1	.86	30,172	10.9	96.8	10.9	1
1.13	868	1.3	100.0	1																1.00	8,802	3.2	100.0	3.2	1
.39	64,765	100.0	100.0	10	.41	73,872	100.0	100.0	10	.43	73,885	100.0	100.0	10	.54	63,277	100.0	100.0	10	.44	275,809	100.0	100.0	100.0	10

TABLE 19.—Total "Revised" f. o. b. mine cost, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in District No. 3a of the State of Ohio.

January-March, 1918, inclusive.			April-June, 1918, inclusive.			July-September, 1918, inclusive.			October-December, 1918, inclusive.			Year 1918.		
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
\$1.63	8,068	12.5	12.5	1	\$1.73	13,549	18.3	18.3	1	\$2.06	7,445	11.8	11.8	1
1.67	5,807	9.0	21.5	1	1.79	8,501	11.6	29.8	1	2.07	8,350	13.2	25.0	1
1.77	13,549	20.9	42.4	1	1.84	6,017	8.2	36.5	1	2.29	5,546	8.7	33.7	1
1.88	8,124	12.5	54.9	1	1.96	8,278	11.2	48.2	1	2.50	16,245	25.7	59.4	2
2.21	11,152	17.2	72.1	1	2.01	13,542	18.3	67.5	1	2.77	9,218	14.6	74.0	1
2.28	2,660	4.1	76.2	1	2.19	2,813	3.9	71.4	1	2.78	1,990	3.1	77.1	1
2.56	3,278	5.1	81.3	1	2.43	4,081	5.5	76.9	1	3.03	11,981	18.9	96.0	2
2.85	5,646	9.2	90.5	1	2.51	7,869	10.6	87.5	1	4.44	2,532	4.0	100.0	1
2.90	5,313	8.3	98.7	1	2.68	7,221	9.8	87.3	1	.....	.....	.....	.....	.....
4.96	8,808	1.3	100.0	1	3.64	1,961	2.7	100.0	1	.....	.....	.....	.....	.....
2.14	64,765	100.0	100.0	10	2.11	73,872	100.0	100.0	10	2.60	83,277	100.0	100.0	10
										2.31	275,809	100.0	100.0	10

TABLE 20.—Total sales realization, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in District No. 3a of the State of Ohio.

January-March, 1918, inclusive.							April-June, 1918, inclusive.							July-September, 1918, inclusive.							October-December, 1918, inclusive.							Year 1918.						
Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.				
\$2.16	13,549	21.0	21.0	1	\$2.18	1	13,549	18.4	18.4	1	\$2.38	1	4,082	5.5	5.5	1	\$2.35	1	1,960	3.1	3.1	1	\$2.23	1	45,418	16.5	16.5	1	45,418	16.5	16.5	1		
2.20	8,068	12.5	33.5	1	2.21	1	2,913	3.9	22.3	1	2.43	1	10,875	14.7	20.2	1	2.40	1	10,364	16.4	19.5	1	2.35	1	11,615	4.2	20.7	1	11,615	4.2	20.7	1		
2.27	8,124	12.6	46.1	1	2.34	1	8,278	11.2	33.5	1	2.61	1	5,446	7.4	27.6	1	2.49	1	7,445	11.8	31.3	1	2.41	1	28,463	10.3	31.0	1	28,463	10.3	31.0	1		
2.45	8,606	13.3	59.4	2	2.41	2	8,501	11.5	45.0	1	2.68	1	6,236	8.4	36.0	1	2.50	1	3,049	4.8	36.1	1	2.62	1	25,791	13.4	44.4	1	25,791	13.4	44.4	1		
2.73	863	1.3	60.7	1	2.64	1	7,899	10.6	55.6	1	2.87	1	12,032	16.3	62.3	1	2.63	1	5,981	9.3	45.4	1	2.70	1	20,319	7.4	51.8	1	20,319	7.4	51.8	1		
2.80	16,939	26.2	86.9	2	2.65	2	1,941	2.7	58.3	1	2.89	1	8,996	12.1	64.4	1	2.70	1	5,555	8.7	54.1	1	2.75	1	31,733	11.5	63.3	1	31,733	11.5	63.3	1		
2.83	5,313	8.2	95.1	1	2.75	1	3,441	4.6	69.0	1	2.91	1	3,441	4.6	69.0	1	2.76	1	2,832	4.0	58.1	1	2.79	1	8,892	3.2	66.5	1	8,892	3.2	66.5	1		
2.97	3,161	4.9	100.0	1	2.78	1	6,017	8.2	84.8	1	2.95	1	8,450	11.4	80.4	1	2.83	1	7,114	13.2	71.3	1	2.86	1	43,880	15.9	82.4	1	43,880	15.9	82.4	1		
.....	.....	.....	.....	.....	2.80	1	7,221	9.8	94.6	1	3.01	1	5,718	7.7	83.1	1	2.89	1	9,218	14.6	85.9	1	2.87	1	13,440	6.7	89.1	1	13,440	6.7	89.1	1		
.....	.....	.....	.....	.....	2.81	1	4,006	5.4	100.0	1	3.64	1	8,822	11.9	100.0	1	2.90	1	8,932	14.1	100.0	1	2.88	1	30,172	10.9	100.0	1	30,172	10.9	100.0	1		
2.49	64,648	100.0	100.0	10	2.64	10	73,847	100.0	100.0	10	2.86	10	74,068	100.0	100.0	10	2.66	10	62,060	100.0	100.0	10	2.64	10	274,633	100.0	100.0	10	274,633	100.0	100.0	10		

COAL.

TABLE 21.—Total "Revised" labor cost, by quarterly and yearly periods for 1918, for 20 operators producing bituminous coal in District No. 4 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.															
\$1.05	24,836	5.1	5.1	1	\$0.88	47,763	8.8	8.8	1	\$0.93	103,076	17.2	17.2	1	\$1.24	61,184	11.8	11.8	1	\$1.01	236,809	11.0	11.0	1	\$1.01	236,809	11.0	11.0	1	\$1.01	236,809	11.0	11.0	1	\$1.01	236,809	11.0	11.0	1										
1.10	6,277	1.3	6.4	1	1.29	73,788	13.6	22.4	1	1.29	8,170	1.4	18.6	1	1.33	37,095	7.2	19.0	1	1.31	246,265	11.5	22.5	1	1.31	246,265	11.5	22.5	1	1.31	246,265	11.5	22.5	1	1.31	246,265	11.5	22.5	1										
1.27	6,631	1.2	7.6	1	1.32	6,095	1.1	23.5	1	1.30	23,584	3.9	22.5	1	1.34	20,855	4.0	23.0	1	1.32	75,359	8.5	26.0	1	1.32	75,359	8.5	26.0	1	1.32	75,359	8.5	26.0	1	1.32	75,359	8.5	26.0	1										
1.29	50,184	10.4	18.0	1	1.33	108,691	20.0	43.5	2	1.31	64,417	10.8	33.3	1	1.36	60,287	11.7	34.7	2	1.34	18,387	9.9	26.9	1	1.34	18,387	9.9	26.9	1	1.34	18,387	9.9	26.9	1	1.34	18,387	9.9	26.9	1										
1.32	91,180	18.9	36.9	1	1.40	19,985	3.7	47.2	1	1.37	32,898	5.5	38.8	1	1.45	11,834	2.3	36.9	1	1.35	26,720	1.3	28.2	1	1.35	26,720	1.3	28.2	1	1.35	26,720	1.3	28.2	1	1.35	26,720	1.3	28.2	1										
1.34	14,179	2.9	39.8	1	1.43	42,090	7.8	55.0	2	1.39	22,612	3.8	42.6	1	1.51	6,824	1.3	38.2	1	1.41	125,606	5.9	34.1	1	1.41	125,606	5.9	34.1	1	1.41	125,606	5.9	34.1	1	1.41	125,606	5.9	34.1	1										
1.46	8,210	1.1	40.9	1	1.48	9,092	1.6	56.6	2	1.46	22,106	2.0	44.6	1	1.60	67,432	13.0	51.2	2	1.42	332,235	15.5	49.6	1	1.42	332,235	15.5	49.6	1	1.42	332,235	15.5	49.6	1	1.42	332,235	15.5	49.6	1										
1.47	8,983	1.0	42.8	1	1.54	4,727	1.9	57.5	1	1.46	8,911	1.3	58.9	1	1.61	77,663	13.0	66.2	1	1.47	43,336	2.0	51.9	1	1.47	43,336	2.0	51.9	1	1.47	43,336	2.0	51.9	1	1.47	43,336	2.0	51.9	1										
1.49	70,869	14.7	57.5	1	1.56	63,223	11.6	70.4	1	1.51	7,953	1.3	60.2	1	1.64	104,138	20.1	86.3	1	1.48	30,937	1.4	53.3	1	1.48	30,937	1.4	53.3	1	1.48	30,937	1.4	53.3	1	1.48	30,937	1.4	53.3	1										
1.50	4,068	.9	58.4	1	1.59	67,741	16.1	86.5	1	1.52	4,137	1.7	60.2	1	1.73	3,970	.8	87.1	1	1.53	235,478	11.7	68.2	1	1.53	235,478	11.7	68.2	1	1.53	235,478	11.7	68.2	1	1.53	235,478	11.7	68.2	1										
1.54	24,772	6.1	63.5	1	1.69	87,741	16.1	86.5	1	1.58	11,318	1.9	62.8	1	1.82	14,106	2.7	89.8	1	1.56	14,283	1.7	68.2	1	1.56	14,283	1.7	68.2	1	1.56	14,283	1.7	68.2	1	1.56	14,283	1.7	68.2	1										
1.55	13,774	2.9	66.4	1	1.73	8,358	1.5	88.0	1	1.72	18,199	10.2	73.0	1	2.20	4,448	.9	90.7	1	1.64	360,265	16.8	85.7	1	1.64	360,265	16.8	85.7	1	1.64	360,265	16.8	85.7	1	1.64	360,265	16.8	85.7	1										
1.59	94,297	19.5	85.9	2	1.79	15,541	2.9	90.9	1	1.82	16,350	3.1	76.1	1	2.24	19,626	3.8	94.5	1	1.67	18,366	3.9	86.6	1	1.67	18,366	3.9	86.6	1	1.67	18,366	3.9	86.6	1	1.67	18,366	3.9	86.6	1										
1.60	29,069	6.0	91.9	1	1.84	21,914	4.0	94.9	1	1.71	17,381	1.2	77.3	1	2.31	16,325	3.2	97.7	1	1.73	81,974	3.8	90.4	2	1.73	81,974	3.8	90.4	2	1.73	81,974	3.8	90.4	2	1.73	81,974	3.8	90.4	2										
1.64	4,772	1.0	92.9	1	1.85	19,187	3.5	98.4	1	1.78	75,585	12.6	89.9	1	2.32	2,805	.5	98.2	1	1.82	92,769	4.3	94.7	1	1.82	92,769	4.3	94.7	1	1.82	92,769	4.3	94.7	1	1.82	92,769	4.3	94.7	1										
1.67	19,807	4.1	97.0	2	1.99	6,019	1.1	99.5	1	1.81	9,893	1.7	91.6	1	2.40	9,265	1.8	100.0	2	1.87	30,469	1.4	96.1	1	1.87	30,469	1.4	96.1	1	1.87	30,469	1.4	96.1	1	1.87	30,469	1.4	96.1	1										
1.86	3,992	.8	97.8	1	1.93	21,504	4.3	99.4	2	1.91	23,461	3.5	95.9	1	2.40	9,265	1.8	100.0	2	1.97	70,216	3.3	99.1	1	1.97	70,216	3.3	99.1	1	1.97	70,216	3.3	99.1	1	1.97	70,216	3.3	99.1	1										
2.19	10,749	2.2	100.0	1	1.94	3,592	.6	100.0	1	1.94	3,592	.6	100.0	1	2.40	9,265	1.8	100.0	2	2.06	12,904	.6	100.0	1	2.06	12,904	.6	100.0	1	2.06	12,904	.6	100.0	1	2.06	12,904	.6	100.0	1										
1.47	482,769	100.0	100.0	20	1.46	544,242	100.0	100.0	20	1.45	599,107	100.0	100.0	20	1.58	517,112	100.0	100.0	20	1.49	2,143,230	100.0	100.0	20	1.49	2,143,230	100.0	100.0	20	1.49	2,143,230	100.0	100.0	20	1.49	2,143,230	100.0	100.0	20										

## COAL.

TABLE 22.—Total "Revised" supply cost, by quarterly and yearly periods for 1918, for 20 operators producing bituminous coal in District No. 4 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.																				
30.06	6,277	1.3	1.3	1	30.11	16,741	3.1	3.1	1	30.07	4,147	0.7	0.7	1	30.09	40,481	7.8	7.8	2	30.10	75,359	8.5	8.5	3.5	1	30.10	75,359	8.5	8.5	1																			
30.08	3,992	2.9	4.2	2	.12	21,914	4.0	7.1	2	.09	42,323	7.0	7.7	2	.18	3,920	7.8	8.6	2	.11	18,387	9.9	9.9	4.4	1	.11	18,387	9.9	9.9	1																			
30.10	14,179	2.9	7.8	2	.13	24,779	4.5	11.6	2	.12	3,592	6.6	8.3	1	.18	74,730	14.4	23.0	1	.14	84,499	4.0	4.0	4.4	2	.14	84,499	4.0	4.4	2																			
30.13	13,081	2.8	10.7	1	.15	15,089	2.7	14.3	2	.13	2,765	5.4	8.7	1	.20	104,138	20.1	43.1	1	.17	43,336	2.0	2.0	10.4	1	.17	43,336	2.0	10.4	1																			
30.16	13,774	2.9	10.7	1	.16	73,768	13.6	27.9	1	.16	64,417	10.8	19.5	1	.21	6,824	1.3	44.4	1	.18	246,265	11.5	6.6	22.5	1	.18	246,265	11.5	22.5	1																			
30.17	50,164	10.4	21.1	1	.19	19,985	3.7	31.6	1	.22	32,828	8.1	61.5	4	.23	57,916	11.2	55.6	4	.19	12,904	6.2	6.2	38.0	1	.19	12,904	6.2	38.0	1																			
30.20	24,782	5.1	26.2	1	.20	91,950	16.9	48.5	1	.22	48,073	5.5	69.6	2	.25	37,065	7.2	65.7	4	.20	332,235	15.5	15.5	41.3	1	.20	332,235	15.5	41.3	1																			
30.21	10,749	2.2	28.4	1	.23	21,560	4.0	52.5	2	.24	7,381	1.2	70.8	1	.26	14,399	2.9	65.7	4	.23	70,742	3.3	3.3	47.2	1	.23	70,742	3.3	47.2	1																			
30.22	91,180	18.9	47.3	1	.28	30,991	5.7	58.2	1	.26	7,381	1.2	70.8	1	.32	60,387	11.6	77.3	1	.24	125,696	5.9	5.9	51.5	1	.24	125,696	5.9	51.5	1																			
30.23	92,801	19.2	66.5	1	.30	8,358	1.5	59.7	1	.28	75,585	12.6	83.4	1	.32	14,371	2.8	80.1	1	.25	92,769	4.3	4.3	51.5	1	.25	92,769	4.3	51.5	1																			
30.27	19,807	4.1	70.6	2	.34	63,223	11.6	71.3	1	.33	61,199	10.2	93.6	1	.35	16,325	3.2	83.3	1	.27	390,265	16.8	16.8	83.3	1	.27	390,265	16.8	83.3	1																			
30.32	29,069	6.0	76.6	1	.35	2,815	5.7	71.8	1	.35	7,953	1.3	94.9	1	.48	4,190	8.8	84.1	1	.29	81,974	3.8	3.8	72.1	1	.29	81,974	3.8	72.1	1																			
30.34	70,069	14.7	91.3	1	.38	12,828	2.4	74.2	2	.39	8,170	1.4	96.3	1	.54	4,190	8.8	84.1	1	.32	255,478	11.9	11.9	84.0	1	.32	255,478	11.9	84.0	1																			
42.42	5,210	1.1	92.4	1	.41	135,504	24.9	99.1	2	.46	9,983	1.7	98.0	1	.72	14,106	2.7	98.6	1	.34	30,469	1.4	1.4	85.4	1	.34	30,469	1.4	85.4	1																			
45.45	5,631	1.2	93.6	1	.55	4,727	9.9	100.0	1	.50	12,106	2.0	100.0	1						.35	26,720	1.3	1.3	86.7	1	.35	26,720	1.3	86.7	1																			
52.54	24,836	5.1	98.7	1																.37	236,809	11.0	11.0	97.7	1	.37	236,809	11.0	97.7	1																			
1.61	1,496	1.0	99.7	1																.53	49,323	2.3	2.3	100.0	2	.53	49,323	2.3	100.0	2																			
.25	432,769	100.0	100.0	20	.27	544,242	100.0	100.0	20	.23	599,107	100.0	100.0	20	.27	517,112	100.0	100.0	20	.26	2,143,230	100.0	100.0	20	.26	2,143,230	100.0	100.0	20																				



TABLE 23.—Total "Revised" general expenses, by quarterly and yearly periods for 1918, for 20 operators producing bituminous coal in District No. 4 of the State of Ohio.

January-March, 1918, inclusive.					April-June, 1918, inclusive.					July-September, 1918, inclusive.					October-December, 1918, inclusive.					Year 1918.									
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.					
\$0.10	50,164	10.4	10.4	1	\$0.08	73,768	13.6	13.6	1	\$0.09	64,417	10.8	10.8	1	\$0.10	57,916	11.2	11.2	1	\$0.09	246,265	11.5	11.5	1	\$0.09	246,265	11.5	11.5	1
.14	91,180	18.9	29.3	1	.15	91,950	16.9	30.5	1	.17	85,811	14.3	25.1	1	.18	63,284	12.2	23.4	1	.15	332,235	15.5	27.0	1	.15	332,235	15.5	27.0	1
.25	29,069	6.0	35.3	2	.22	19,985	3.7	34.2	2	.20	23,584	3.9	29.0	2	.23	20,855	4.0	27.4	2	.23	75,359	3.5	30.5	2	.23	75,359	3.5	30.5	2
.28	21,322	4.4	39.7	2	.24	16,741	3.1	37.3	2	.22	22,612	3.8	32.8	2	.28	3,920	7.2	28.2	2	.26	70,742	3.3	33.8	2	.26	70,742	3.3	33.8	2
.29	70,969	14.7	54.4	3	.25	8,358	1.5	38.8	3	.24	7,953	1.3	34.1	3	.29	37,095	7.2	35.4	3	.28	125,096	5.9	39.7	3	.28	125,096	5.9	39.7	3
.30	42,548	8.8	63.2	3	.27	30,991	6.7	44.5	3	.25	9,893	1.7	35.8	3	.31	60,087	11.6	47.0	3	.29	30,469	1.4	41.1	3	.29	30,469	1.4	41.1	3
.33	10,749	2.2	65.4	1	.30	22,687	4.1	48.6	2	.26	32,828	5.5	41.3	2	.32	19,626	3.8	50.8	2	.31	314,394	14.6	55.7	2	.31	314,394	14.6	55.7	2
.38	8,983	1.9	67.3	1	.31	6,733	1.3	49.9	1	.27	30,626	5.1	46.4	1	.33	14,106	2.7	53.5	1	.32	177,268	8.3	64.0	1	.32	177,268	8.3	64.0	1
.39	12,664	2.6	69.9	1	.32	85,137	15.6	65.5	2	.28	26,226	4.7	51.1	2	.35	18,561	3.6	57.1	2	.33	18,366	1.9	64.9	1	.33	18,366	1.9	64.9	1
.40	4,098	.9	70.8	1	.35	20,268	3.8	69.3	2	.30	61,199	10.2	61.3	2	.38	7,346	1.4	68.5	1	.34	30,957	1.4	66.3	1	.34	30,957	1.4	66.3	1
.43	92,801	19.2	90.0	1	.37	11,599	2.1	71.4	1	.32	18,739	3.1	64.4	1	.40	115,574	22.3	80.8	3	.39	43,336	2.0	68.3	1	.39	43,336	2.0	68.3	1
.46	6,277	1.3	91.3	1	.42	5,592	1.0	72.4	1	.39	75,585	12.6	77.0	1	.46	28,224	5.5	86.3	3	.42	360,265	16.8	85.1	1	.42	360,265	16.8	85.1	1
.49	5,210	1.1	92.4	1	.46	87,741	16.1	88.5	1	.40	8,170	1.4	78.4	1	.50	61,184	11.3	98.1	1	.45	12,904	.6	85.7	1	.45	12,904	.6	85.7	1
.51	4,772	1.0	93.4	1	.51	6,095	1.1	89.6	1	.42	103,026	17.2	97.5	1	.56	2,505	.5	99.1	1	.47	26,780	1.3	87.0	1	.47	26,780	1.3	87.0	1
.54	5,631	1.2	94.6	1	.52	47,763	8.8	98.4	1	.43	103,026	17.2	97.5	1	.70	2,371	.5	99.1	1	.48	18,387	.9	87.9	1	.48	18,387	.9	87.9	1
.64	1,496	.3	94.9	1	.60	8,834	1.6	100.0	2	.45	3,592	.6	98.1	1	.91	4,448	.9	100.0	1	.49	236,909	11.0	98.9	1	.49	236,909	11.0	98.9	1
.68	24,836	5.1	100.0	1	.58	7,381	.7	98.8	1	.58	7,381	.7	98.8	1	.91	4,448	.9	100.0	1	.63	23,058	1.1	100.0	1	.63	23,058	1.1	100.0	1
.30	482,769	100.0	100.0	20	.30	544,242	100.0	100.0	20	.29	599,107	100.0	100.0	20	.33	517,112	100.0	100.0	20	.30	2,143,280	100.0	100.0	20	.30	2,143,280	100.0	100.0	20

## COAL.

TABLE 24.—Total "Revised" f. o. b. mine cost, by quarterly and yearly periods for 1918, for 20 operators producing bituminous coal in District No. 4 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.																				
\$1.56	50,164	10.4	10.4	1	\$1.56	73,768	13.0	13.0	1	\$1.56	64,417	10.8	10.8	1	\$1.56	20,855	4.0	4.0	1	\$1.56	246,265	11.5	11.5	1	\$1.56	246,265	11.5	11.5	1	20																			
1.61	6,277	1.3	11.7	1	1.61	108,601	20.0	33.6	2	1.57	103,096	17.2	28.0	1	1.69	57,918	11.2	15.2	1	1.65	75,389	3.5	13.0	1	1.65	75,389	3.5	13.0	1	20																			
1.67	91,180	18.0	30.6	1	1.61	67,748	12.5	46.1	2	1.59	98,594	15.9	44.9	1	1.67	37,036	7.2	22.4	1	1.77	322,285	13.5	30.5	1	1.77	322,285	13.5	30.5	1	20																			
1.72	14,170	2.9	33.5	1	1.63	63,611	11.9	58.0	1	1.84	68,924	11.3	69.3	1	1.67	69,924	12.2	34.6	1	1.87	145,080	6.0	41.5	1	1.87	145,080	6.0	41.5	1	20																			
1.96	8,683	1.7	35.2	1	1.67	58,410	9.3	67.7	1	1.86	58,410	9.3	77.0	1	2.09	11,928	2.2	39.8	1	1.93	141,083	5.8	48.3	1	1.93	141,083	5.8	48.3	1	20																			
2.01	13,774	2.9	38.2	1	2.00	30,991	4.7	72.5	1	2.06	8,170	1.4	73.9	1	2.17	3,920	0.8	37.6	1	1.96	70,742	3.3	51.6	1	1.96	70,742	3.3	51.6	1	20																			
2.03	28,680	6.0	44.3	2	2.03	6,892	1.1	74.5	1	2.10	30,620	5.1	62.0	3	2.18	66,911	12.9	70.5	2	2.04	45,386	2.0	53.6	1	2.04	45,386	2.0	53.6	1	20																			
2.12	20,809	4.7	49.0	1	2.21	11,318	1.9	80.9	1	2.18	11,318	1.9	83.9	1	2.34	104,138	20.1	82.4	1	2.10	14,283	0.7	54.3	1	2.10	14,283	0.7	54.3	1	20																			
2.17	26,009	6.0	55.0	2	2.23	68,856	12.9	69.5	2	2.20	12,106	2.0	65.9	1	2.27	61,154	11.8	82.4	1	2.17	26,720	1.3	55.6	1	2.17	26,720	1.3	55.6	1	20																			
2.24	3,992	.8	55.8	1	2.34	18,739	3.1	79.2	1	2.32	14,371	2.2	70.1	1	2.38	14,371	2.8	85.2	1	2.19	235,478	11.9	67.5	1	2.19	235,478	11.9	67.5	1	20																			
2.26	117,637	24.3	80.1	2	2.44	15,641	2.9	81.4	1	2.35	2,766	0.4	79.6	1	2.62	19,028	3.8	89.5	1	2.36	30,957	1.4	85.7	1	2.36	30,957	1.4	85.7	1	20																			
2.32	5,631	1.2	91.3	1	2.56	4,727	.9	82.3	1	2.44	26,461	4.3	83.9	1	2.69	14,106	2.7	92.2	1	2.42	58,916	2.7	88.4	1	2.42	58,916	2.7	88.4	1	20																			
2.37	7,143	1.5	92.8	1	2.56	87,741	16.1	98.4	1	2.45	75,586	12.6	96.9	1	2.70	7,346	1.4	93.6	1	2.43	90,216	3.3	91.7	1	2.43	90,216	3.3	91.7	1	20																			
2.43	5,210	1.1	93.9	1	2.62	6,019	1.1	99.5	1	2.45	3,892	.6	97.1	1	3.12	21,400	4.2	97.8	2	2.44	92,769	4.3	96.0	1	2.44	92,769	4.3	96.0	1	20																			
2.63	12,664	2.6	96.5	1	3.10	2,815	.5	100.0	1	2.51	9,883	1.7	98.8	1	3.14	2,665	.5	98.3	1	2.51	30,469	1.4	97.4	1	2.51	30,469	1.4	97.4	1	20																			
2.72	10,749	2.2	98.7	1	2.72	10,749	2.2	98.7	1	2.55	7,381	1.2	100.0	1	3.23	4,190	.8	99.1	1	2.59	18,366	.9	98.3	1	2.59	18,366	.9	98.3	1	20																			
3.34	1,496	.3	100.0	1	3.34	1,496	.3	100.0	1	2.55	7,381	1.2	100.0	1	3.23	4,190	.8	99.1	1	2.70	12,904	.6	98.9	1	2.70	12,904	.6	98.9	1	20																			
2.02	482,769	100.0	100.0	20	2.03	544,242	100.0	100.0	20	1.97	595,107	100.0	100.0	20	2.18	517,112	100.0	100.0	20	2.05	2,143,280	100.0	100.0	20	2.05	2,143,280	100.0	100.0	20	20																			

TABLE 25.—Total sales realization, by quarterly and yearly periods for 1918, for 20 operators producing bituminous coal in District No. 4 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
Per ton by \$0.01	Sales tonnage, net (tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Groupings.	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01

## COAL.

TABLE 26.—Total "Revised" labor cost, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in District No. 5 of the State of Ohio.

January-March, 1918, inclusive.						April-June, 1918, inclusive.						July-September, 1918, inclusive.						October-December, 1918, inclusive.						Year 1918.					
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
1.32	34,390	29.8	29.8	8	\$1.31	31,439	23.1	23.1	1	\$1.45	28,349	22.3	22.3	1	\$1.50	23,590	24.0	24.0	1	\$1.41	119,491	25.1	25.1	1	\$1.41	119,491	25.1	25.1	1
1.39	52,789	28.4	58.2	1	1.36	33,006	24.2	47.3	1	1.58	18,590	14.6	36.9	1	1.53	23,756	24.0	48.2	1	1.44	112,147	23.5	48.6	1	1.44	112,147	23.5	48.6	1
1.40	16,016	13.9	61.7	1	1.51	16,450	12.5	59.4	1	1.60	16,317	12.8	63.9	1	1.74	17,928	13.3	65.1	1	1.61	69,984	14.5	63.1	1	1.61	69,984	14.5	63.1	1
1.58	8,963	7.7	73.6	1	1.62	17,030	12.5	71.9	1	1.81	24,359	19.2	68.9	1	1.76	17,928	18.3	69.8	1	1.69	50,767	14.6	73.7	1	1.69	50,767	14.6	73.7	1
1.65	8,334	7.2	83.3	1	1.67	9,598	7.1	76.0	1	1.74	7,655	6.0	74.9	1	1.82	2,080	2.1	71.9	1	1.72	16,240	8.4	77.1	1	1.72	16,240	8.4	77.1	1
1.75	3,334	2.9	89.6	1	1.72	2,496	1.8	85.1	1	1.83	9,578	7.5	82.4	1	1.86	5,057	5.6	77.1	1	1.79	10,627	2.7	79.3	1	1.79	10,627	2.7	79.3	1
1.94	3,310	2.8	94.1	1	1.74	2,446	1.8	85.1	1	1.85	2,758	2.2	84.6	1	2.06	8,457	5.2	85.7	1	1.82	23,447	6.0	85.3	1	1.82	23,447	6.0	85.3	1
2.10	2,847	2.5	96.6	1	1.83	10,450	7.7	92.8	1	1.86	9,766	7.7	92.3	1	2.10	5,127	3.3	90.9	1	1.94	30,595	6.4	91.7	1	1.94	30,595	6.4	91.7	1
2.29	5,520	3.4	100.0	1	2.04	6,050	3.7	96.5	1	2.05	6,336	3.0	97.3	1	2.14	5,127	3.6	94.8	1	1.98	20,679	4.3	96.0	1	1.98	20,679	4.3	96.0	1
2.44	3,920	3.4	100.0	1	2.28	4,766	3.5	100.0	1	2.17	3,454	2.7	100.0	1	2.16	5,069	5.2	100.0	1	2.21	18,885	4.0	100.0	1	2.21	18,885	4.0	100.0	1
1.53	115,502	100.0	100.0	10	1.54	136,101	100.0	100.0	10	1.65	127,162	100.0	100.0	10	1.73	98,097	100.0	100.0	10	1.61	476,862	100.0	100.0	10	1.61	476,862	100.0	100.0	10

TABLE 27.—Total "Revised" supply cost, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in District No. 5 of the State of Ohio.

January-March, 1918, inclusive.							April-June, 1918, inclusive.							July-September, 1918, inclusive.							October-December, 1918, inclusive.							Year 1918.						
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.					
\$0.03	3,334	2.9	2.9	1	\$0.08	20,346	15.0	15.0	2	\$0.12	9,578	7.5	7.5	1	\$0.14	5,127	5.2	5.2	1	\$0.11	39,074	8.2	8.2	2	\$0.11	39,074	8.2	8.2	2					
.08	16,016	13.9	16.8	1	.10	27,446	18.5	22.1	1	.15	18,590	14.6	22.1	1	.15	17,146	17.3	30.8	2	.14	68,984	14.5	22.7	1	.14	68,984	14.5	22.7	1					
.10	3,916	3.4	20.2	1	.12	16,450	12.1	28.9	1	.17	2,758	2.2	24.3	1	.17	17,923	18.3	30.8	1	.15	50,566	6.4	28.1	1	.15	50,566	6.4	28.1	1					
.11	8,963	7.7	27.9	1	.16	5,050	3.7	32.6	1	.18	9,706	7.7	32.0	1	.22	23,560	24.0	54.8	1	.18	20,679	4.3	33.4	1	.18	20,679	4.3	33.4	1					
.13	5,310	4.5	32.4	1	.21	5,568	4.1	36.7	1	.21	13,991	11.0	43.0	2	.23	3,863	3.9	68.7	1	.22	112,147	23.5	66.9	1	.22	112,147	23.5	66.9	1					
.14	4,027	3.5	35.9	1	.23	31,439	23.1	59.8	1	.22	24,359	19.2	62.2	1	.28	5,069	5.2	63.9	1	.30	69,632	14.6	71.5	2	.30	69,632	14.6	71.5	2					
.17	2,847	2.5	38.4	1	.27	4,766	3.5	63.3	1	.39	16,317	12.6	75.0	1	.34	8,457	8.6	72.5	1	.33	16,240	3.4	74.9	1	.33	16,240	3.4	74.9	1					
.21	32,789	28.4	66.8	1	.41	17,080	12.5	75.8	1	.59	28,349	22.3	97.3	1	.61	23,756	24.2	96.7	1	.59	119,491	25.1	100.0	1	.59	119,491	25.1	100.0	1					
.23	34,320	29.8	96.6	1	.43	33,006	24.2	100.0	1	.47	3,454	2.7	100.0	1	.61	3,191	3.3	100.0	1	.61	119,491	25.1	100.0	1	.61	119,491	25.1	100.0	1					
.55	3,920	3.4	100.0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....				
.19	115,502	100.0	100.0	10	.25	136,101	100.0	100.0	10	.27	127,162	100.0	100.0	10	.32	98,097	100.0	100.0	10	.25	476,862	100.0	100.0	10	.25	476,862	100.0	100.0	10					

TABLE 28.—Total "Revised" general expenses, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in District No. 5 of the State of Ohio.

January-March, 1918, inclusive.					April-June, 1918, inclusive.					July-September, 1918, inclusive.					October-December, 1918, inclusive.					Year 1918.									
Per ton cost by \$0.01 groupings.	Production ton-nage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton-nage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton-nage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton-nage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production ton-nage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.					
\$0.15	3,334	2.9	2.9	1	\$0.20	31,439	23.1	23.1	1	\$0.21	2,758	2.2	2.2	1	\$0.22	2,089	2.1	2.1	1	\$0.19	10,637	2.2	2.2	1	\$0.19	10,637	2.2	2.2	1
.18	32,789	28.4	31.3	1	.22	12,342	9.1	32.2	2	.24	24,359	19.2	51.4	1	.25	23,560	18.0	69.4	1	.21	112,147	23.5	25.7	1	.21	112,147	23.5	25.7	1
.33	13,253	11.4	42.7	3	.25	10,450	7.7	59.9	1	.26	9,578	7.5	67.4	1	.33	3,127	2.4	71.8	1	.28	28,447	6.0	31.7	1	.28	28,447	6.0	31.7	1
.34	34,380	29.8	72.5	1	.32	17,030	12.5	84.4	1	.28	9,766	7.7	79.6	1	.38	23,756	24.2	93.8	1	.34	30,995	6.4	38.1	1	.34	30,995	6.4	38.1	1
.43	16,016	13.9	86.4	1	.33	33,066	24.2	100.0	1	.33	16,317	12.8	99.4	1	.40	3,191	3.3	100.0	1	.36	119,491	25.1	63.2	1	.36	119,491	25.1	63.2	1
.52	8,963	7.7	94.1	1	.30	5,568	4.1	100.0	1	.41	28,349	22.3	121.7	1	.41	5,057	3.9	100.0	1	.40	16,240	3.4	66.6	1	.40	16,240	3.4	66.6	1
.57	2,847	2.5	96.6	1	.43	16,450	12.1	100.0	1	.42	7,653	6.0	100.0	1	.51	17,928	13.3	100.0	1	.41	50,767	10.0	77.2	1	.41	50,767	10.0	77.2	1
.61	3,920	3.4	100.0	1	.49	5,050	3.7	100.0	1	.43	25,926	19.6	100.0	2	.60	8,457	6.6	100.0	1	.55	13,985	4.0	100.0	1	.55	13,985	4.0	100.0	1
.33	115,502	100.0	100.0	10	.31	136,101	100.0	100.0	10	.35	127,162	100.0	100.0	10	.41	98,097	100.0	100.0	10	.35	476,862	100.0	100.0	10	.35	476,862	100.0	100.0	10

COAL.

TABLE 29.—Total "Revised" f. o. b. mine cost, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in District No. 5 of the State of Ohio.

January-March, 1918, inclusive.					April-June, 1918, inclusive.					July-September, 1918, inclusive.					October-December, 1918, inclusive.					Year 1918.					
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
\$1.78	32,780	28.4	28.4	1	\$1.74	31,439	23.1	23.1	1	\$2.07	24,359	19.2	19.2	1	\$1.97	23,560	24.0	24.0	1	\$1.87	112,147	23.5	23.5	23.5	1
1.87	4,027	3.5	31.9	1	2.02	9,886	7.3	30.4	1	2.19	18,580	14.6	33.8	1	2.19	2,089	2.1	26.1	1	2.09	10,627	2.2	25.7	25.7	1
1.89	34,380	29.8	61.7	1	2.06	18,866	13.9	44.3	2	2.21	9,578	7.5	41.8	1	2.44	17,928	18.3	44.4	1	2.16	119,491	25.1	50.8	50.8	1
1.93	3,334	2.9	64.6	1	2.12	33,006	24.2	68.5	1	2.27	2,738	2.2	43.5	1	2.45	5,057	6.2	49.6	1	2.19	68,984	14.5	65.3	65.3	1
2.09	10,016	12.9	78.5	1	2.10	10,450	7.7	76.2	1	2.32	28,349	22.3	65.8	1	2.50	23,756	24.2	73.6	1	2.21	28,447	6.0	71.3	71.3	1
2.28	8,963	7.7	86.2	1	2.24	22,588	16.6	92.8	2	2.32	26,083	20.5	86.3	2	2.59	5,127	5.2	79.0	1	2.43	50,767	10.6	81.9	81.9	1
2.37	3,916	3.4	89.6	1	2.71	6,050	3.7	96.5	1	2.37	7,635	6.0	92.3	1	2.75	8,191	3.3	82.3	1	2.45	30,585	6.4	88.3	88.3	1
2.86	5,310	4.5	94.1	1	3.14	4,766	3.5	100.0	1	3.09	6,336	5.0	97.3	1	3.08	12,320	12.5	94.8	2	2.60	16,240	3.4	91.7	91.7	1
3.03	2,847	2.5	96.6	1	.....	.....	.....	.....	.....	3.22	3,454	2.7	100.0	1	.....	5,099	5.2	100.0	.....	3.06	18,885	4.0	100.0	100.0	1
3.60	3,920	3.4	100.0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
2.05	115,502	100.0	100.0	10	2.10	136,101	100.0	100.0	10	2.37	127,102	100.0	100.0	10	2.46	98,697	100.0	100.0	10	2.21	476,862	100.0	100.0	100.0	10

TABLE 30.—Total sales realization, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in District No. 5 of the State of Ohio.

January-March, 1918, inclusive.						April-June, 1918, inclusive.						July-September, 1918, inclusive.						October-December, 1918, inclusive.						Year 1918.					
Per ton by \$0.01	Sales (net tons)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales (net tons)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales (net tons)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales (net tons)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales (net tons)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales (net tons)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01
\$2.32	34,380	31.7	31.7	1	\$2.35	33,006	25.7	25.7	1	\$2.34	2,758	2.2	2.2	1	\$2.32	3,883	4.2	4.2	1	\$2.36	10,627	2.3	2.3	1	\$2.36	10,627	2.3	2.3	1
2.40	3,334	3.1	34.8	1	2.37	2,446	1.9	27.6	1	2.51	28,349	23.1	25.3	1	2.28	2,089	2.3	6.5	1	2.43	119,491	26.4	26.7	1	2.43	119,491	26.4	26.7	1
2.42	32,789	30.2	65.0	1	2.42	31,439	24.4	52.0	1	2.52	24,359	19.9	45.2	1	2.41	5,057	5.5	12.0	1	2.47	112,147	24.8	53.5	1	2.47	112,147	24.8	53.5	1
2.77	4,027	3.7	68.7	1	2.71	5,568	4.3	56.3	1	2.55	16,317	13.3	58.5	1	2.56	23,560	25.5	37.5	1	2.63	18,985	4.2	57.7	1	2.63	18,985	4.2	57.7	1
2.81	6,763	6.2	74.9	2	2.75	15,500	12.0	68.3	2	2.67	13,991	11.4	69.9	2	2.58	5,069	5.5	43.0	1	2.68	28,447	6.3	64.0	1	2.68	28,447	6.3	64.0	1
2.82	3,920	3.6	78.5	1	2.77	31,991	24.6	92.9	3	2.68	9,578	7.8	77.7	1	2.59	23,766	25.7	68.7	1	2.70	50,766	11.2	75.2	1	2.70	50,766	11.2	75.2	1
2.86	14,405	13.3	100.0	2	2.80	9,116	7.1	100.0	1	2.79	9,766	8.0	85.7	1	2.67	5,127	5.5	74.2	2	2.71	20,679	4.6	76.8	1	2.71	20,679	4.6	76.8	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.79	14,042	11.5	97.2	1	2.70	20,611	22.4	96.6	2	2.73	30,595	6.8	86.6	1	2.73	30,595	6.8	86.6	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.83	3,454	2.8	100.0	1	2.76	3,191	3.4	100.0	1	2.76	16,240	3.6	90.2	1	2.76	16,240	3.6	90.2	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.53	108,581	100.0	100.0	10	2.57	128,766	100.0	100.0	10	2.60	122,614	100.0	100.0	10	2.58	92,323	100.0	100.0	10	2.57	452,284	100.0	100.0	10	2.57	452,284	100.0	100.0	10



TABLE 31.—Total "Revised" labor cost, by quarterly and yearly periods for 1918, for 54 operators producing bituminous coal in District No. 6 of the State of Ohio.

January-March, 1918, inclusive.							April-June, 1918, inclusive.							July-September, 1918, inclusive.							October-December, 1918, inclusive.							Year 1918.								
Per ton cost by	Production (net tons).	Per cent of total.	Accumulated per	Number of operators by \$0.01	Per ton cost by	Production (net tons).	Per cent of total.	Accumulated per	Number of operators by \$0.01	Per ton cost by	Production (net tons).	Per cent of total.	Accumulated per	Number of operators by \$0.01	Per ton cost by	Production (net tons).	Per cent of total.	Accumulated per	Number of operators by \$0.01	Per ton cost by	Production (net tons).	Per cent of total.	Accumulated per	Number of operators by \$0.01	Per ton cost by	Production (net tons).	Per cent of total.	Accumulated per	Number of operators by \$0.01	Per ton cost by	Production (net tons).	Per cent of total.	Accumulated per	Number of operators by \$0.01		
1.24	3,432	0.4	0.4	1	1.25	27,843	2.8	2.8	1	1.07	6,182	0.0	0.0	1	0.92	6,601	0.8	0.8	1	0.92	141,252	3.6	3.6	1	1.24	141,252	3.6	3.6	1	1.24	141,252	3.6	3.6	1		
1.27	26,212	2.8	3.2	1	1.27	53,926	5.5	8.3	1	1.21	31,658	2.8	2.8	1	1.21	10,677	1.2	2.7	1	1.21	205,896	5.3	8.9	1	1.32	205,896	5.3	8.9	1	1.32	205,896	5.3	8.9	1		
1.31	26,419	2.8	6.4	1	1.26	1,494	0.0	8.3	1	1.24	95,225	5.9	8.3	1	1.24	31,866	3.7	6.1	1	1.24	12,601	0.3	9.2	1	1.43	12,601	0.3	9.2	1	1.43	12,601	0.3	9.2	1		
1.32	3,902	0.3	0.3	1	1.31	8,703	0.9	9.2	1	1.25	12,181	1.1	10.4	1	1.23	3,147	4.4	6.1	1	1.23	40,922	1.1	10.3	1	1.43	40,922	1.1	10.3	1	1.43	40,922	1.1	10.3	1		
1.36	197,016	20.3	27.7	2	1.34	2,648	11.0	20.7	3	1.33	13,689	1.7	11.1	2	1.45	41,076	4.8	10.9	2	1.45	214,777	8.0	36.9	3	1.47	214,777	8.0	36.9	3	1.47	214,777	8.0	36.9	3		
1.40	27,700	3.0	30.7	2	1.41	187,946	14.2	34.9	1	1.33	13,689	1.7	11.1	2	1.45	41,076	4.8	10.9	2	1.45	782,913	10.7	46.6	1	1.47	782,913	10.7	46.6	1	1.47	782,913	10.7	46.6	1		
1.41	64,617	7.0	37.7	1	1.43	188,519	14.2	40.1	1	1.43	93,804	8.4	21.2	2	1.49	13,528	1.6	12.8	1	1.49	82,214	1.3	40.1	1	1.45	82,214	1.3	40.1	1	1.45	82,214	1.3	40.1	1		
1.43	38,115	3.9	41.0	1	1.43	50,773	3.2	42.3	1	1.44	80,014	7.2	28.4	2	1.53	46,349	5.4	18.2	1	1.53	123,923	3.2	40.1	1	1.45	123,923	3.2	40.1	1	1.45	123,923	3.2	40.1	1		
1.44	23,014	2.7	44.3	3	1.46	21,886	2.2	46.0	2	1.47	144,463	13.0	41.4	2	1.55	52,649	5.8	22.0	1	1.55	22,782	0.6	41.4	1	1.45	22,782	0.6	41.4	1	1.45	22,782	0.6	41.4	1		
1.53	24,832	2.7	48.2	2	1.51	35,900	3.7	46.0	2	1.48	8,492	1.8	42.2	1	1.57	74,021	8.6	30.0	1	1.57	146,428	8.8	45.6	2	1.55	146,428	8.8	45.6	2	1.55	146,428	8.8	45.6	2		
1.54	10,732	1.2	48.2	2	1.51	50,497	6.2	51.2	2	1.51	20,922	1.9	44.1	1	1.58	22,280	2.5	33.1	3	1.58	173,761	2.5	62.3	1	1.56	173,761	2.5	62.3	1	1.56	173,761	2.5	62.3	1		
1.55	53,974	5.8	54.0	2	1.52	19,147	2.0	53.2	2	1.53	31,225	2.8	46.9	2	1.59	4,821	0.3	34.0	3	1.59	84,101	1.1	69.9	2	1.58	84,101	1.1	69.9	2	1.58	84,101	1.1	69.9	2		
1.59	54,464	5.9	59.9	2	1.58	20,162	2.6	55.8	3	1.54	41,188	1.3	52.6	3	1.64	2,923	0.2	34.3	3	1.64	267,566	7.0	88.1	2	1.59	267,566	7.0	88.1	2	1.59	267,566	7.0	88.1	2		
1.64	6,985	0.8	61.4	1	1.58	7,278	0.7	56.5	1	1.57	14,611	1.6	54.1	1	1.67	190,871	14.0	48.3	1	1.67	62,876	1.6	90.9	1	1.62	62,876	1.6	90.9	1	1.62	62,876	1.6	90.9	1		
1.65	3,996	0.4	61.8	1	1.61	4,566	1.5	57.0	1	1.59	7,218	1.6	54.1	1	1.68	56,108	6.5	54.8	1	1.68	85,887	3.2	93.1	1	1.64	85,887	3.2	93.1	1	1.64	85,887	3.2	93.1	1		
1.67	3,840	0.4	62.2	1	1.64	84,517	8.0	66.7	4	1.60	11,428	1.0	56.5	1	1.73	29,735	3.5	58.3	2	1.73	117,536	3.0	96.1	1	1.64	117,536	3.0	96.1	1	1.64	117,536	3.0	96.1	1		
1.71	52,249	5.7	70.6	2	1.67	13,685	1.4	69.2	1	1.62	74,927	6.7	65.0	1	1.70	31,519	3.6	61.9	2	1.70	32,570	0.8	96.9	1	1.64	32,570	0.8	96.9	1	1.64	32,570	0.8	96.9	1		
1.72	3,487	0.4	71.0	2	1.68	9,407	1.0	70.2	1	1.64	40,786	3.7	70.9	2	1.78	20,529	2.4	63.5	1	1.78	119,230	3.0	96.9	1	1.67	119,230	3.0	96.9	1	1.67	119,230	3.0	96.9	1		
1.73	22,148	2.4	73.4	1	1.72	23,428	2.8	72.6	1	1.69	2,900	1.1	72.3	1	1.78	3,776	0.4	66.3	1	1.78	153,994	4.0	96.9	1	1.68	153,994	4.0	96.9	1	1.68	153,994	4.0	96.9	1		
1.78	11,446	1.2	74.6	1	1.76	26,967	2.8	75.4	1	1.69	12,544	1.1	72.3	1	1.80	10,856	1.3	69.8	1	1.80	62,840	1.4	76.0	1	1.71	62,840	1.4	76.0	1	1.71	62,840	1.4	76.0	1		
1.81	13,823	1.5	77.3	1	1.76	13,013	1.3	76.7	1	1.74	22,883	2.1	74.4	2	1.83	9,578	0.7	70.9	1	1.83	11,930	0.3	76.3	1	1.74	11,930	0.3	76.3	1	1.74	11,930	0.3	76.3	1		
1.83	24,590	2.7	80.0	1	1.82	45,297	4.7	81.4	2	1.75	21,102	1.9	74.7	1	1.87	6,528	0.8	71.7	1	1.87	105,008	2.7	79.0	2	1.83	105,008	2.7	79.0	2	1.83	105,008	2.7	79.0	2		
1.87	24,928	2.7	82.7	1	1.89	41,584	4.4	80.3	2	1.79	21,246	1.9	76.0	1	1.89	21,699	2.5	74.2	1	1.89	85,242	2.2	83.5	1	1.85	85,242	2.2	83.5	1	1.85	85,242	2.2	83.5	1		
1.90	22,200	2.4	85.1	1	1.89	4,987	0.9	87.2	1	1.82	35,987	3.5	79.3	1	1.93	8,566	1.0	75.7	1	1.93	61,326	1.6	86.1	1	1.91	61,326	1.6	86.1	1	1.91	61,326	1.6	86.1	1		
1.95	13,306	1.4	86.5	1	1.94	4,284	0.4	87.6	1	1.84	32,281	2.9	82.2	1	1.93	12,389	1.0	76.7	1	1.93	39,001	1.6	86.1	1	1.91	39,001	1.6	86.1	1	1.91	39,001	1.6	86.1	1		
1.99	16,225	1.8	88.3	1	1.94	33,894	3.4	91.0	1	1.84	24,761	2.2	84.4	1	1.96	16,497	1.9	78.6	1	1.96	18,963	1.5	86.6	1	1.94	18,963	1.5	86.6	1	1.94	18,963	1.5	86.6	1		
2.04	9,261	1.0	89.3	1	1.98	2,193	0.2	91.2	1	1.88	8,268	2.7	85.1	1	1.97	21,955	2.0	81.2	2	1.97	68,451	1.8	88.4	1	2.01	68,451	1.8	88.4	1	2.01	68,451	1.8	88.4	1		
2.05	3,907	0.4	89.7	1	2.01	2,381	0.2	91.4	1	1.95	22,168	2.0	87.1	1	2.10	16,378	1.9	83.1	2	2.10				2.02				2.02				2.02				2.02

2.07	6.985	.8	90.5	1	2.08	9.511	1.0	92.4	1	1.96	16,356	1.5	88.6	1	2.11	5,940	.7	83.8	1	2.05	77,572	2.0	90.4	1
2.11	6.944	.8	91.3	1	2.34	3,180	.3	92.7	1	2.24	18,473	1.7	90.3	1	2.13	7,109	.8	84.6	1	2.14	28,016	.7	91.1	1
2.13	16,474	1.8	93.1	1	2.25	5,406	.6	93.3	1	2.25	11,297	1.0	91.3	1	2.14	10,693	1.2	85.8	1	2.16	6,775	.2	91.3	1
2.14	1,472	.2	93.3	1	2.36	6,943	.7	94.0	1	2.26	13,640	1.2	92.5	2	2.18	3,962	.5	86.3	1	2.26	30,096	.8	92.1	1
2.23	11,815	1.3	94.6	1	2.37	9,974	1.0	95.0	1	2.27	8,030	.7	93.2	1	2.21	3,431	.4	86.7	1	2.33	38,418	1.0	93.1	1
2.33	5,146	.5	95.1	1	2.40	6,335	.6	95.6	1	2.42	6,128	.5	93.7	1	2.23	13,296	1.5	88.2	1	2.40	57,598	1.5	94.6	2
2.35	4,678	.5	95.6	1	2.41	6,963	.7	96.3	1	2.53	28,311	2.5	96.2	1	2.26	31,653	3.7	91.9	3	2.44	20,060	.5	95.1	1
2.37	4,579	.5	96.1	1	2.61	3,152	.3	96.5	1	2.61	3,152	.3	96.5	1	2.43	12,702	1.5	93.4	1	2.45	28,682	.7	95.8	1
2.58	7,063	.8	96.9	1	2.62	5,181	.5	97.0	1	2.65	30,184	.6	97.1	1	2.44	4,785	3.5	97.5	1	2.48	34,506	.9	96.7	1
2.60	2,846	.3	97.6	1	2.66	7,820	.7	97.8	1	2.65	6,859	.8	98.3	1	2.61	5,487	.6	98.9	1	2.50	82,496	2.3	99.0	1
2.70	6,454	.7	98.6	1	2.67	9,133	.8	98.6	1	2.65	5,487	.6	98.9	1	2.61	5,487	.6	98.9	1	2.52	12,168	.3	99.3	1
2.71	5,258	.6	99.2	1	2.70	13,306	1.2	99.8	1	2.65	5,487	.6	98.9	1	2.61	5,487	.6	98.9	1	2.52	12,168	.3	99.3	1
2.78	7,277	.8	100.0	1	3.30	2,180	2	100.0	1	2.73	9,463	1.1	100.0	1	2.73	9,463	1.1	100.0	1	2.73	28,690	.7	100.0	1
1.64	921,296	100.0	100.0	54	1.63	977,282	100.0	100.0	54	1.78	880,285	100.0	100.0	54	1.87	3,572,465	100.0	100.0	54	1.87	3,572,465	100.0	100.0	54

TABLE 32.—Total "Revised" supply cost, by quarterly and yearly periods for 1918, for 54 operators producing bituminous coal in District No. 6 of the State of Ohio.

January-March, 1918, inclusive.						April-June, 1918, inclusive.						July-September, 1918, inclusive.						October-December, 1918, inclusive.						Year 1918.						
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
1	1,472	0.2	0.2	1	1	8,703	0.6	0.9	1	1	8,090	0.7	0.7	1	1	10,677	1.2	1.2	1	1	10,677	1.2	1.2	1	1	10,677	1.2	1.2	1	1
2	16,474	1.8	2.0	1	2	6,965	5.2	1.6	1	2	3,174	3.3	1.0	1	2	6,711	7.4	8.0	1	2	6,711	7.4	8.0	1	2	6,711	7.4	8.0	1	2
3	6,944	0.8	2.8	1	3	4,578	3.5	2.1	1	3	12,544	1.1	2.1	1	3	4,529	8.2	16.2	1	3	4,529	8.2	16.2	1	3	4,529	8.2	16.2	1	3
4	12,721	1.5	4.3	2	4	2,030	2.3	3.6	2	4	12,544	1.1	3.2	2	4	4,529	8.2	24.4	2	4	4,529	8.2	24.4	2	4	4,529	8.2	24.4	2	4
5	17,721	1.9	6.2	2	5	5,030	5.7	6.8	2	5	40,935	3.6	6.8	2	5	12,544	1.1	35.0	2	5	12,544	1.1	35.0	2	5	12,544	1.1	35.0	2	5
6	26,414	2.1	9.3	1	6	11,596	1.1	9.1	1	6	5,349	5.9	7.3	3	6	5,349	5.9	40.3	3	6	5,349	5.9	40.3	3	6	5,349	5.9	40.3	3	6
7	19,930	2.2	11.5	1	7	11,596	1.1	10.4	1	7	25,684	2.2	12.3	3	7	13,236	1.5	41.8	3	7	13,236	1.5	41.8	3	7	13,236	1.5	41.8	3	7
8	132,546	14.3	25.8	1	8	31,444	3.2	13.6	1	8	31,444	2.2	14.5	1	8	13,236	1.5	43.3	1	8	13,236	1.5	43.3	1	8	13,236	1.5	43.3	1	8
9	224,927	24.4	50.2	1	9	45,261	4.7	22.3	1	9	2,874	3.1	15.6	1	9	13,236	1.5	46.4	1	9	13,236	1.5	46.4	1	9	13,236	1.5	46.4	1	9
10	17,663	1.9	52.1	2	10	45,261	4.7	22.3	2	10	63,141	5.7	21.1	2	10	35,528	4.2	50.6	2	10	35,528	4.2	50.6	2	10	35,528	4.2	50.6	2	10
11	3,802	0.4	54.6	1	11	13,613	1.3	23.6	1	11	63,141	5.7	21.1	1	11	35,528	4.2	54.8	1	11	35,528	4.2	54.8	1	11	35,528	4.2	54.8	1	11
12	3,842	0.4	55.0	1	12	27,343	2.8	26.4	1	12	63,141	5.7	21.1	2	12	35,528	4.2	56.0	2	12	35,528	4.2	56.0	2	12	35,528	4.2	56.0	2	12
13	14,328	1.6	53.7	1	13	5,259	1.0	27.4	1	13	32,004	2.8	31.6	2	13	35,528	4.2	57.2	2	13	35,528	4.2	57.2	2	13	35,528	4.2	57.2	2	13
14	3,842	0.4	55.0	1	14	53,936	5.3	32.9	1	14	32,004	2.8	31.6	2	14	35,528	4.2	58.6	2	14	35,528	4.2	58.6	2	14	35,528	4.2	58.6	2	14
15	2,807	0.3	55.4	1	15	176,396	18.1	51.0	1	15	272	0.3	31.7	2	15	35,528	4.2	59.9	2	15	35,528	4.2	59.9	2	15	35,528	4.2	59.9	2	15
16	5,309	0.6	56.0	1	16	13,157	1.4	58.4	1	16	169,343	15.2	46.9	2	16	35,528	4.2	60.5	2	16	35,528	4.2	60.5	2	16	35,528	4.2	60.5	2	16
17	7,337	0.8	56.8	1	17	3,048	0.4	58.8	1	17	30,916	1.9	48.8	2	17	35,528	4.2	61.4	2	17	35,528	4.2	61.4	2	17	35,528	4.2	61.4	2	17
18	29,419	3.2	60.0	1	18	15,167	1.5	60.3	1	18	30,916	1.9	48.8	2	18	35,528	4.2	62.3	2	18	35,528	4.2	62.3	2	18	35,528	4.2	62.3	2	18
19	52,096	5.7	65.7	3	19	15,167	1.5	60.3	1	19	30,916	1.9	48.8	2	19	35,528	4.2	63.2	2	19	35,528	4.2	63.2	2	19	35,528	4.2	63.2	2	19
20	7,065	0.8	66.5	1	20	21,896	2.2	63.1	1	20	30,916	1.9	48.8	2	20	35,528	4.2	64.1	2	20	35,528	4.2	64.1	2	20	35,528	4.2	64.1	2	20
21	16,225	1.8	68.3	1	21	33,677	3.6	69.5	1	21	30,916	1.9	48.8	2	21	35,528	4.2	65.0	2	21	35,528	4.2	65.0	2	21	35,528	4.2	65.0	2	21
22	70,042	7.6	75.9	2	22	33,677	3.6	69.5	1	22	30,916	1.9	48.8	2	22	35,528	4.2	65.9	2	22	35,528	4.2	65.9	2	22	35,528	4.2	65.9	2	22
23	40,438	4.8	80.7	2	23	20,043	2.0	71.5	1	23	30,916	1.9	48.8	2	23	35,528	4.2	66.8	2	23	35,528	4.2	66.8	2	23	35,528	4.2	66.8	2	23
24	56,800	6.1	86.8	2	24	33,603	3.4	74.9	1	24	30,916	1.9	48.8	2	24	35,528	4.2	67.7	2	24	35,528	4.2	67.7	2	24	35,528	4.2	67.7	2	24
25	4,579	0.5	87.3	1	25	30,775	5.2	80.1	1	25	30,916	1.9	48.8	2	25	35,528	4.2	68.2	2	25	35,528	4.2	68.2	2	25	35,528	4.2	68.2	2	25
26	21,810	2.7	91.3	1	26	1,859	0.2	80.3	1	26	30,916	1.9	48.8	2	26	35,528	4.2	68.7	2	26	35,528	4.2	68.7	2	26	35,528	4.2	68.7	2	26
27	11,815	1.3	88.6	1	27	2,813	3.1	83.4	1	27	30,916	1.9	48.8	2	27	35,528	4.2	69.2	2	27	35,528	4.2	69.2	2	27	35,528	4.2	69.2	2	27
28	53,549	5.8	97.1	3	28	4,264	0.4	83.8	1	28	30,916	1.9	48.8	2	28	35,528	4.2	69.7	2	28	35,528	4.2	69.7	2	28	35,528	4.2	69.7	2	28
29	53,549	5.8	97.1	3	29	30,896	3.2	87.9	1	29	30,916	1.9	48.8	2	29	35,528	4.2	70.2	2	29	35,528	4.2	70.2	2	29	35,528	4.2	70.2	2	29
30	5,927	0.6	100.0	1	30	8,967	0.9	87.9	1	30	30,916	1.9	48.8	2	30	35,528	4.2	70.7	2	30	35,528	4.2	70.7	2	30	35,528	4.2	70.7	2	30

.60	4,506	5	88.4	1	.58	32,281	2.9	91.5	1	.67	5,144	.6	85.6	1	.59	68,651	1.8	92.0	1
.61	18,717	1.9	80.3	1	.60	31,071	2.8	94.3	1	.68	12,702	1.3	87.1	1	.60	34,505	.9	92.9	1
.62	5,406	.6	80.9	1	.76	5,181	.5	94.8	1	.69	13,345	1.6	88.7	1	.62	20,060	.5	93.4	1
.63	32,639	3.4	94.3	2	.82	9,133	.8	95.6	1	.72	14,974	1.7	90.4	1	.66	100,899	2.6	98.0	1
.65	23,428	2.4	98.7	1	.91	18,689	1.7	97.3	1	.73	22,331	2.6	93.0	2	.78	87,557	2.3	98.3	1
.66	20,110	2.2	98.9	1	1.02	24,781	2.2	99.5	1	.77	4,785	.6	93.6	1	.78	15,696	.4	98.7	1
.78	10,772	1.1	100.0	1	1.04	5,955	.5	100.0	1	.81	20,529	2.4	96.0	1	.87	52,214	1.3	100.0	1
1.16										.83	21,699	2.5	98.5	1					
										1.02	13,239	1.5	100.0	2					
.28	921,286	100.0	100.0	54	.35	1,113,632	100.0	100.0	54	.41	860,265	100.0	100.0	54	.34	3,872,486	100.0	100.0	54

## COST REPORTS OF FEDERAL TRADE COMMISSION.

TABLE 33.—Total "Revised" general expenses, by quarterly and yearly periods for 1918, for 54 operators producing bituminous coal in District No. 6 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.																				
\$0.05	3,802	0.4	0.4	1	\$0.05	4,578	0.5	0.5	1	\$0.05	3,174	0.3	0.3	1	\$0.07	2,922	2,922	0.3	0.3	1	\$0.05	14,476	0.4	0.4	1	\$0.05	14,476	0.4	0.4	1																			
.08	4,673	.5	.9	1	.08	27,343	2.8	3.1	1	.08	31,658	3.7	4.4	1	.09	31,396	31,396	3.7	4.4	1	.09	116,569	3.0	3.4	1	.09	116,569	3.0	3.4	1																			
.10	30,042	3.2	4.5	1	.12	5,406	.6	3.9	1	.11	6,955	.5	4.7	1	.11	3,776	3,776	1.1	5.5	1	.15	15,586	.4	3.8	1	.15	15,586	.4	3.8	1																			
.15	3,432	.4	4.5	1	.15	13,519	1.4	18.3	1	.14	11,793	1.1	17.7	1	.15	9,538	9,538	1.1	17.7	1	.16	11,936	.3	4.1	1	.16	11,936	.3	4.1	1																			
.16	122,232	13.3	17.8	1	.18	1,859	.2	18.3	1	.17	14,453	1.2	20.9	1	.18	7,990	7,990	3.2	20.9	1	.17	32,570	.8	4.9	1	.17	32,570	.8	4.9	1																			
.19	19,439	2.2	20.0	3	.19	81,322	8.2	26.5	3	.17	35,430	3.2	34.5	2	.18	2,841	2,841	9.9	34.5	2	.18	507,281	13.1	18.0	2	.18	507,281	13.1	18.0	2																			
.20	64,617	7.0	27.0	1	.20	50,497	7.6	31.7	1	.19	151,767	13.9	37.0	2	.19	106,870	106,870	12.7	37.0	2	.19	29,016	.7	18.7	1	.19	29,016	.7	18.7	1																			
.21	22,434	2.4	29.4	1	.22	78,137	7.8	39.6	4	.21	27,754	2.5	37.0	2	.21	58,160	58,160	6.7	37.0	2	.21	806,365	20.8	39.5	4	.21	806,365	20.8	39.5	4																			
.22	43,364	4.7	34.1	1	.24	26,967	2.8	42.4	1	.20	7,218	.6	37.6	1	.22	135,790	135,790	15.8	42.6	3	.24	48,615	1.3	40.8	2	.24	48,615	1.3	40.8	2																			
.23	48,955	5.3	39.4	1	.25	9,407	1.0	43.4	1	.21	45,967	4.2	41.8	2	.24	13,296	13,296	1.5	44.1	1	.25	12,691	.3	41.1	1	.25	12,691	.3	41.1	1																			
.24	10,722	1.2	40.6	1	.26	24,425	2.5	45.9	2	.22	2,900	.3	42.1	1	.27	13,296	13,296	1.5	44.1	1	.28	169,983	4.4	45.5	2	.28	169,983	4.4	45.5	2																			
.25	3,996	.2	41.0	1	.28	85,148	8.7	54.6	2	.23	12,065	1.0	43.1	2	.28	4,795	4,795	.6	44.7	1	.29	164,273	4.2	49.7	2	.29	164,273	4.2	49.7	2																			
.26	19,087	2.1	43.1	1	.29	51,032	5.2	59.8	3	.26	24,246	2.2	57.2	2	.30	6,601	6,601	2.0	47.5	2	.30	207,463	6.2	56.7	3	.30	207,463	6.2	56.7	3																			
.27	125,527	13.7	56.8	1	.30	50,775	5.2	65.0	3	.28	29,365	2.6	59.2	3	.33	95,723	95,723	11.1	58.6	4	.32	237,264	2.4	63.3	3	.32	237,264	2.4	63.3	3																			
.29	3,397	.4	57.0	1	.32	5,942	.6	65.6	2	.30	65,368	5.8	65.6	2	.33	10,693	10,693	11.1	58.6	4	.33	93,434	2.4	63.3	3	.33	93,434	2.4	63.3	3																			
.30	3,397	.4	57.0	1	.34	12,967	1.3	67.2	2	.31	38,592	3.5	69.1	4	.36	26,061	26,061	3.1	62.9	2	.34	61,326	1.0	68.5	1	.34	61,326	1.0	68.5	1																			
.31	13,523	1.5	59.1	1	.36	31,260	3.1	70.3	3	.33	65,243	5.9	75.0	3	.38	65,315	65,315	7.6	70.5	3	.35	39,967	1.0	69.5	1	.35	39,967	1.0	69.5	1																			
.32	72,113	7.9	67.0	3	.38	52,838	5.4	78.7	4	.34	24,761	2.2	77.2	4	.40	37,043	37,043	4.3	74.8	2	.36	221,192	5.7	75.2	3	.36	221,192	5.7	75.2	3																			
.33	31,609	3.4	70.4	1	.37	20,232	2.4	80.9	4	.35	22,631	2.2	79.2	4	.41	12,043	12,043	1.4	76.2	2	.38	28,692	.7	75.9	1	.38	28,692	.7	75.9	1																			
.34	6,523	.8	72.5	1	.39	23,317	2.4	83.3	3	.36	21,102	1.9	81.1	2	.42	2,711	2,711	2.1	78.6	3	.38	113,414	3.1	81.9	2	.38	113,414	3.1	81.9	2																			
.37	13,306	1.4	80.9	1	.41	40,317	4.2	87.5	2	.37	17,674	1.5	82.6	2	.46	7,567	7,567	3.6	82.2	2	.40	117,643	3.7	86.8	2	.40	117,643	3.7	86.8	2																			
.39	77,945	8.4	80.9	4	.42	8,375	.4	90.8	1	.39	15,471	1.4	84.0	2	.48	30,497	30,497	3.6	84.4	2	.42	163,685	4.2	90.0	2	.42	163,685	4.2	90.0	2																			
.41	11,515	.8	83.0	1	.44	23,222	2.4	90.8	1	.40	31,071	2.8	86.8	2	.49	18,502	18,502	.0	85.0	1	.43	122,241	3.3	92.3	2	.43	122,241	3.3	92.3	2																			
.43	87,234	3.5	86.5	1	.46	10,772	1.1	91.9	1	.41	8,492	.3	87.6	1	.50	4,821	4,821	.0	85.0	1	.44	89,496	2.3	93.3	2	.44	89,496	2.3	93.3	2																			
.44	11,185	.8	86.5	1	.48	8,339	.4	92.8	1	.43	26,311	2.5	90.1	2	.51	14,974	14,974	1.7	87.1	1	.48	50,345	.9	93.9	1	.48	50,345	.9	93.9	1																			
.45	25,336	2.8	90.5	2	.51	17,938	1.9	94.7	1	.46	5,349	.4	95.0	2	.52	12,213	12,213	1.7	87.1	1	.50	26,531	.7	93.9	1	.50	26,531	.7	93.9	1																			
.47	5,146	.5	91.0	1	.61	2,193	.1	96.2	1	.47	9,133	.8	95.8	1	.53	5,487	5,487	.6	89.1	1	.51	52,168	1.0	94.2	1	.51	52,168	1.0	94.2	1																			
.49	4,537	.5	92.0	1	.66	13,013	1.3	96.2	1	.49	9,133	.8	95.8	1	.55	9,463	9,463	.6	89.1	1	.53	39,001	1.0	94.2	1	.53	39,001	1.0	94.2	1																			
.50	16,474	1.8	93.8	1	.67	14,527	1.5	97.7	1	.55	9,463	.6	96.7	1	.56	9,463	9,463	.6	89.1	1	.56				.56				.56																				

.55	14,340	1.5	95.3	2	.70	1,494	.1	97.8	1	.58	11,090	1.0	97.7	1	.57	29,735	3.5	98.7	1	.56	9,544	.2	95.4	1
.56	2,659	.3	95.6	1	.71	21,474	2.2	100.0	1	.75	2,180	.2	97.9	1	.58	1,838	.2	98.9	1	.59	16,155	.4	95.8	1
.68	4,941	.5	96.1	1	.....	.....	.....	.....	.....	.76	3,132	.3	98.2	1	.59	13,345	1.6	98.5	1	.60	76,147	2.0	97.8	2
.71	24,923	2.7	98.8	1	.....	.....	.....	.....	.....	.80	18,473	1.7	99.9	1	.67	3,431	.4	96.9	1	.63	6,775	2.2	98.0	1
.80	11,446	1.2	100.0	1	.....	.....	.....	.....	.....	.68	1,272	1.1	100.0	1	.69	4,723	.5	96.4	1	.80	77,672	2.0	100.0	1
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.73	7,109	.8	97.2	1	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.78	5,940	.7	97.9	1	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.97	5,144	.6	98.8	1	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.14	12,702	1.5	100.0	1	.....	.....	.....	.....	.....
.80	921,298	100.0	100.0	54	.29	977,283	100.0	100.0	54	.27	1,113,632	100.0	100.0	54	.84	860,285	100.0	100.0	54	.80	3,872,495	100.0	100.0	54

## COST REPORTS OF FEDERAL TRADE COMMISSION.

TABLE 34.—Total "Revised" f. o. b. mine cost, by quarterly and yearly periods for 1918, for 54 operators producing bituminous coal in District No. 6 of the State of Ohio.

January-March, 1918, inclusive.							April-June, 1918, inclusive.							July-September, 1918, inclusive.							October-December, 1918, inclusive.							Year 1918.						
Per ton cost by \$0.01 groupings.	Production, tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production, tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production, tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production, tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production, tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production, tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production, tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
1.15	26,202	2.6	2.6	1	1.15	31,658	2.6	2.6	1	1.15	31,658	2.6	2.6	1	1.15	31,658	2.6	2.6	1	1.15	31,658	2.6	2.6	1	1.15	31,658	2.6	2.6	1	1.15	31,658	2.6	2.6	1
1.16	3,578	.4	3.0	1	1.16	3,578	.4	3.0	1	1.16	3,578	.4	3.0	1	1.16	3,578	.4	3.0	1	1.16	3,578	.4	3.0	1	1.16	3,578	.4	3.0	1	1.16	3,578	.4	3.0	1
1.17	3,703	.4	3.4	1	1.17	3,703	.4	3.4	1	1.17	3,703	.4	3.4	1	1.17	3,703	.4	3.4	1	1.17	3,703	.4	3.4	1	1.17	3,703	.4	3.4	1	1.17	3,703	.4	3.4	1
1.18	122,232	13.3	16.8	1	1.18	122,232	13.3	16.8	1	1.18	122,232	13.3	16.8	1	1.18	122,232	13.3	16.8	1	1.18	122,232	13.3	16.8	1	1.18	122,232	13.3	16.8	1	1.18	122,232	13.3	16.8	1
1.19	14,769	1.6	18.4	1	1.19	14,769	1.6	18.4	1	1.19	14,769	1.6	18.4	1	1.19	14,769	1.6	18.4	1	1.19	14,769	1.6	18.4	1	1.19	14,769	1.6	18.4	1	1.19	14,769	1.6	18.4	1
1.20	10,732	1.2	20.6	1	1.20	10,732	1.2	20.6	1	1.20	10,732	1.2	20.6	1	1.20	10,732	1.2	20.6	1	1.20	10,732	1.2	20.6	1	1.20	10,732	1.2	20.6	1	1.20	10,732	1.2	20.6	1
1.21	4,493	.7	22.4	1	1.21	4,493	.7	22.4	1	1.21	4,493	.7	22.4	1	1.21	4,493	.7	22.4	1	1.21	4,493	.7	22.4	1	1.21	4,493	.7	22.4	1	1.21	4,493	.7	22.4	1
1.22	3,418	.5	27.4	1	1.22	3,418	.5	27.4	1	1.22	3,418	.5	27.4	1	1.22	3,418	.5	27.4	1	1.22	3,418	.5	27.4	1	1.22	3,418	.5	27.4	1	1.22	3,418	.5	27.4	1
1.23	33,259	3.6	31.5	1	1.23	33,259	3.6	31.5	1	1.23	33,259	3.6	31.5	1	1.23	33,259	3.6	31.5	1	1.23	33,259	3.6	31.5	1	1.23	33,259	3.6	31.5	1	1.23	33,259	3.6	31.5	1
1.24	9,835	.5	34.5	1	1.24	9,835	.5	34.5	1	1.24	9,835	.5	34.5	1	1.24	9,835	.5	34.5	1	1.24	9,835	.5	34.5	1	1.24	9,835	.5	34.5	1	1.24	9,835	.5	34.5	1
1.25	3,509	.6	35.4	1	1.25	3,509	.6	35.4	1	1.25	3,509	.6	35.4	1	1.25	3,509	.6	35.4	1	1.25	3,509	.6	35.4	1	1.25	3,509	.6	35.4	1	1.25	3,509	.6	35.4	1
1.26	94,825	10.3	41.8	1	1.26	94,825	10.3	41.8	1	1.26	94,825	10.3	41.8	1	1.26	94,825	10.3	41.8	1	1.26	94,825	10.3	41.8	1	1.26	94,825	10.3	41.8	1	1.26	94,825	10.3	41.8	1
1.27	19,930	2.2	44.6	1	1.27	19,930	2.2	44.6	1	1.27	19,930	2.2	44.6	1	1.27	19,930	2.2	44.6	1	1.27	19,930	2.2	44.6	1	1.27	19,930	2.2	44.6	1	1.27	19,930	2.2	44.6	1
1.28	6,623	.7	45.3	1	1.28	6,623	.7	45.3	1	1.28	6,623	.7	45.3	1	1.28	6,623	.7	45.3	1	1.28	6,623	.7	45.3	1	1.28	6,623	.7	45.3	1	1.28	6,623	.7	45.3	1
1.29	26,469	2.9	48.2	1	1.29	26,469	2.9	48.2	1	1.29	26,469	2.9	48.2	1	1.29	26,469	2.9	48.2	1	1.29	26,469	2.9	48.2	1	1.29	26,469	2.9	48.2	1	1.29	26,469	2.9	48.2	1
1.30	43,594	4.8	53.7	1	1.30	43,594	4.8	53.7	1	1.30	43,594	4.8	53.7	1	1.30	43,594	4.8	53.7	1	1.30	43,594	4.8	53.7	1	1.30	43,594	4.8	53.7	1	1.30	43,594	4.8	53.7	1
1.31	2,659	.3	54.0	1	1.31	2,659	.3	54.0	1	1.31	2,659	.3	54.0	1	1.31	2,659	.3	54.0	1	1.31	2,659	.3	54.0	1	1.31	2,659	.3	54.0	1	1.31	2,659	.3	54.0	1
1.32	13,833	1.5	55.5	1	1.32	13,833	1.5	55.5	1	1.32	13,833	1.5	55.5	1	1.32	13,833	1.5	55.5	1	1.32	13,833	1.5	55.5	1	1.32	13,833	1.5	55.5	1	1.32	13,833	1.5	55.5	1
1.33	18,059	2.0	57.5	1	1.33	18,059	2.0	57.5	1	1.33	18,059	2.0	57.5	1	1.33	18,059	2.0	57.5	1	1.33	18,059	2.0	57.5	1	1.33	18,059	2.0	57.5	1	1.33	18,059	2.0	57.5	1
1.34	9,361	1.0	58.3	1	1.34	9,361	1.0	58.3	1	1.34	9,361	1.0	58.3	1	1.34	9,361	1.0	58.3	1	1.34	9,361	1.0	58.3	1	1.34	9,361	1.0	58.3	1	1.34	9,361	1.0	58.3	1
1.35	22,148	2.4	71.7	1	1.35	22,148	2.4	71.7	1	1.35	22,148	2.4	71.7	1	1.35	22,148	2.4	71.7	1	1.35	22,148	2.4	71.7	1	1.35	22,148	2.4	71.7	1	1.35	22,148	2.4	71.7	1
1.36	22,260	2.4	74.1	1	1.36	22,260	2.4	74.1	1	1.36	22,260	2.4	74.1	1	1.36	22,260	2.4	74.1	1	1.36	22,260	2.4	74.1	1	1.36	22,260	2.4	74.1	1	1.36	22,260	2.4	74.1	1
1.37	5,941	.7	74.6	1	1.37	5,941	.7	74.6	1	1.37	5,941	.7	74.6	1	1.37	5,941	.7	74.6	1	1.37	5,941	.7	74.6	1	1.37	5,941	.7	74.6	1	1.37	5,941	.7	74.6	1
1.38	5,927	.6	75.3	1	1.38	5,927	.6	75.3	1	1.38	5,927	.6	75.3	1	1.38	5,927	.6	75.3	1	1.38	5,927	.6	75.3	1	1.38	5,927	.6	75.3	1	1.38	5,927	.6	75.3	1
1.39	2,281	.3	77.5	1	1.39	2,281	.3	77.5	1	1.39	2,281	.3	77.5	1	1.39	2,281	.3	77.5	1	1.39	2,281	.3	77.5	1	1.39	2,281	.3	77.5	1	1.39	2,281	.3	77.5	1
1.40	1,472	.2	77.7	1	1.40	1,472	.2	77.7	1	1.40	1,472	.2	77.7	1	1.40	1,472	.2	77.7	1	1.40	1,472	.2	77.7	1	1.40	1,472	.2	77.7	1	1.40	1,472	.2	77.7	1
1.41	16,226	1.8	79.6	1	1.41	16,226	1.8	79.6	1	1.41	16,226	1.8	79.6	1	1.41	16,226	1.8	79.6	1	1.41	16,226	1.8	79.6	1	1.41	16,226	1.8	79.6	1	1.41	16,226	1.8	79.6	1

[illegible]



TABLE 35.—Total sales realization, by quarterly and yearly periods for 1918, for 53 operators producing bituminous coal in District No. 6 of the State of Ohio.

January-March, 1918, inclusive.							April-June, 1918, inclusive.							July-September, 1918, inclusive.							October-December, 1918, inclusive.							Year 1918.						
Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01					
\$2.00	3,802	0.4	0.4	1	\$2.01	4,578	0.5	0.5	1	\$2.00	3,174	0.3	0.3	1	\$2.44	2,922	0.3	0.3	1	\$2.09	14,476	0.4	0.4	1	\$2.09	14,476	0.4	0.4	1					
2.20	3,457	0.4	0.9	1	2.16	8,745	0.9	1.4	1	2.59	6,182	0.6	0.9	1	2.51	10,692	1.3	1.6	1	2.51	39,906	1.1	1.5	1	2.51	39,906	1.1	1.5	1					
2.29	14,769	1.7	2.5	1	2.27	4,813	0.5	1.9	1	2.60	12,162	1.1	2.0	1	2.58	6,601	0.8	2.4	1	2.54	40,830	1.1	2.6	1	2.54	40,830	1.1	2.6	1					
2.32	6,995	0.8	3.3	1	2.31	11,050	1.2	3.1	1	2.66	5,967	0.6	2.6	1	2.64	2,841	0.3	2.7	1	2.56	22,833	0.6	3.2	1	2.56	22,833	0.6	3.2	1					
2.33	22,148	2.5	5.8	1	2.33	70,985	7.5	10.6	1	2.74	5,955	0.5	3.1	1	2.68	4,821	0.6	3.3	1	2.57	173,751	4.6	7.8	1	2.57	173,751	4.6	7.8	1					
2.35	16,474	1.8	7.6	1	2.35	6,335	0.7	11.3	1	2.75	40,786	3.8	6.9	1	2.70	9,251	1.1	4.4	1	2.62	214,797	5.7	13.5	1	2.62	214,797	5.7	13.5	1					
2.37	64,784	7.2	14.8	1	2.40	50,497	5.4	16.7	1	2.75	2,874	0.3	7.2	1	2.70	8,154	1.0	5.4	1	2.60	82,775	2.2	15.7	1	2.60	82,775	2.2	15.7	1					
2.45	43,584	4.9	19.7	1	2.52	15,477	0.6	17.3	1	2.79	32,281	3.0	10.7	1	2.71	1,838	0.2	5.6	1	2.64	29,016	0.8	16.5	1	2.64	29,016	0.8	16.5	1					
2.68	24,923	2.8	22.5	1	2.70	15,167	1.6	18.9	1	2.85	16,356	1.5	13.2	1	2.75	38,894	4.6	10.2	1	2.67	24,783	0.7	17.2	1	2.67	24,783	0.7	17.2	1					
2.72	4,318	0.5	23.0	1	2.72	35,046	3.7	22.6	1	2.88	14,986	1.5	13.2	1	2.75	29,735	3.6	13.8	1	2.75	15,586	0.3	20.9	1	2.75	15,586	0.3	20.9	1					
2.75	3,994	0.4	23.4	1	2.74	6,943	0.7	23.3	1	2.89	52,844	4.9	18.1	1	2.77	10,693	1.3	15.1	1	2.78	122,241	3.3	24.2	1	2.78	122,241	3.3	24.2	1					
2.77	4,678	0.5	23.9	1	2.75	58,322	6.3	29.6	1	2.91	6,128	0.6	18.7	1	2.78	19,276	2.3	17.4	1	2.79	98,071	2.7	23.6	1	2.79	98,071	2.7	23.6	1					
2.78	6,383	0.7	24.6	1	2.76	13,608	1.3	20.0	1	2.92	13,608	1.3	20.0	1	2.79	3,379	0.1	18.5	1	2.80	22,672	0.6	24.2	1	2.80	22,672	0.6	24.2	1					
2.80	19,737	2.3	26.9	1	2.77	110,475	11.8	42.9	1	2.93	67,019	2.7	23.0	1	2.80	11,713	1.4	19.9	1	2.81	26,530	1.7	26.2	1	2.81	26,530	1.7	26.2	1					
2.81	6,051	0.7	27.6	1	2.79	40,733	4.3	47.2	1	2.94	30,101	2.7	26.7	1	2.83	32,498	4.0	23.9	1	2.83	51,100	2.4	28.6	1	2.83	51,100	2.4	28.6	1					
2.82	10,390	1.2	28.8	1	2.80	100,025	10.6	57.8	1	2.95	101,631	9.3	41.0	1	2.84	18,783	2.3	26.2	1	2.84	91,902	2.4	31.0	1	2.84	91,902	2.4	31.0	1					
2.83	6,430	0.7	29.5	1	2.81	4,284	0.5	58.3	1	2.97	20,013	2.6	43.6	1	2.85	31,538	3.7	29.9	1	2.85	24,599	0.7	31.7	1	2.85	24,599	0.7	31.7	1					
2.85	13,815	1.7	31.2	1	2.82	39,437	4.2	62.5	1	2.98	75,981	7.0	50.6	1	2.87	7,795	0.6	30.5	1	2.87	173,981	4.6	33.9	1	2.87	173,981	4.6	33.9	1					
2.86	15,340	2.0	33.2	1	2.83	45,770	4.8	67.3	1	2.99	61,869	5.8	56.4	1	2.88	4,793	0.9	31.4	1	2.88	99,477	2.4	36.3	1	2.88	99,477	2.4	36.3	1					
2.87	19,732	2.3	35.4	1	2.84	53,802	5.6	70.9	1	3.00	114,650	10.6	67.0	1	2.90	46,394	5.0	37.0	1	2.90	111,636	2.3	38.6	1	2.90	111,636	2.3	38.6	1					
2.95	19,300	2.2	37.6	1	2.85	63,772	5.7	76.6	1	3.01	9,133	0.8	67.8	1	2.90	37,217	4.4	41.4	1	2.91	62,066	1.7	39.3	1	2.91	62,066	1.7	39.3	1					
3.02	6,822	0.7	39.3	1	2.86	3,988	0.3	78.9	1	3.02	6,181	0.5	73.8	1	2.91	60,949	3.7	49.8	1	2.92	22,187	0.6	40.9	1	2.92	22,187	0.6	40.9	1					
3.07	192,282	17.0	56.3	1	2.88	29,499	2.5	79.4	1	3.02	25,833	6.5	74.3	1	2.92	14,540	1.4	52.9	1	2.93	241,226	7.0	51.9	1	2.93	241,226	7.0	51.9	1					
3.11	68,514	7.6	63.9	1	2.97	117,532	16.7	96.1	1	3.03	5,181	0.1	93.7	1	2.94	14,540	1.4	52.9	1	2.94	211,325	5.6	56.5	1	2.94	211,325	5.6	56.5	1					
3.12	6,509	0.7	64.6	1	2.97	3,180	0.3	96.4	1	3.07	109,035	9.1	83.7	1	2.94	45,039	3.4	62.4	1	2.95	62,877	1.7	59.2	1	2.95	62,877	1.7	59.2	1					
3.13	20,490	2.3	66.9	1	3.00	8,987	1.2	97.6	1	3.07	144,463	13.4	97.1	1	2.95	70,111	2.5	71.3	1	2.96	204,843	5.4	64.6	1	2.96	204,843	5.4	64.6	1					
3.14	3,688	0.4	67.3	1	3.02	13,688	1.5	99.1	1	3.08	31,071	2.9	100.0	1	2.96	20,824	0.9	73.8	1	2.98	57,372	1.6	66.2	1	2.98	57,372	1.6	66.2	1					
3.15	16,426	1.8	69.1	1	3.27	8,339	0.9	100.0	1	3.27	50,964	6.1	80.4	1	2.99	50,964	6.1	80.4	1	3.00	196,964	5.2	71.4	1	3.00	196,964	5.2	71.4	1					

[illegible]

TABLE 36.—Total "Revised" labor cost, by quarterly and yearly periods for 1918, for 15 operators producing bituminous coal in District No. 7 of the State of Ohio.

January-March, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.										
1.53	61,644	28.9	28.9	1	\$1.37	6,628	3.4	3.4	1	\$1.45	8,363	3.7	3.7	1	\$1.38	8,201	4.7	4.7	1	\$1.45	28,306	28.306	28.3	28.3	1	\$1.45	28,306	28.3	28.3	1									
1.57	10,965	5.0	33.9	1	1.55	54,410	28.1	31.5	1	1.52	7,091	3.2	6.9	1	1.70	5,207	3.0	7.7	1	1.58	227,010	227.010	28.1	31.6	1	1.58	227,010	28.1	31.6	1									
1.58	8,745	4.1	38.0	1	1.60	12,858	6.6	38.1	1	1.53	61,981	27.7	24.6	1	1.75	48,675	27.6	25.3	1	1.60	28,756	28.756	26.6	35.2	1	1.60	28,756	26.6	35.2	1									
1.66	5,024	2.4	40.4	1	1.62	7,623	4.0	42.1	1	1.68	45,220	20.2	54.8	1	1.79	6,170	2.6	38.8	1	1.75	42,677	42.677	26.3	40.5	1	1.75	42,677	26.3	40.5	1									
1.82	11,777	5.5	45.9	1	1.77	7,543	3.9	46.0	1	1.74	10,637	4.7	59.5	1	1.93	2,884	1.6	40.4	1	1.81	39,429	39.429	26.9	45.4	1	1.81	39,429	26.9	45.4	1									
1.91	10,905	5.1	51.0	1	1.81	9,240	4.8	50.8	1	1.75	9,396	4.7	63.7	1	1.96	7,405	2.4	44.6	1	1.89	35,762	35.762	27.4	49.8	1	1.89	35,762	27.4	49.8	1									
1.93	8,841	2.7	53.7	1	1.88	8,246	4.3	55.1	1	1.84	13,443	6.0	69.7	1	2.00	7,225	2.1	46.7	1	1.94	135,112	135.112	16.7	66.5	1	1.94	135,112	16.7	66.5	1									
2.00	3,120	1.5	55.2	1	1.92	24,865	12.9	68.0	1	1.90	6,594	2.9	72.6	1	2.05	40,998	23.1	71.8	2	1.98	26,604	26.604	16.7	69.8	1	1.98	26,604	16.7	69.8	1									
2.00	29,667	13.9	69.1	1	2.03	2,862	2.0	70.0	1	1.97	15,155	6.8	79.4	2	2.16	7,938	3.4	76.2	1	2.03	118,481	118.481	23.3	73.5	1	2.03	118,481	23.3	73.5	1									
2.24	5,255	2.5	74.8	1	2.08	8,411	4.4	75.3	1	2.01	2,850	1.3	80.7	1	2.32	6,051	2.0	81.6	1	2.15	32,687	32.687	23.9	80.7	1	2.15	32,687	23.9	80.7	1									
2.33	21,754	10.2	85.0	1	2.42	4,311	2.2	77.9	1	2.17	4,896	2.2	84.9	1	2.40	19,231	10.8	82.4	1	2.32	23,754	23.754	23.9	80.7	1	2.32	23,754	23.9	80.7	1									
2.40	8,194	3.8	88.8	1	2.45	18,300	9.5	87.4	1	2.45	18,419	8.2	93.1	1	2.49	9,746	2.1	94.5	1	2.40	18,168	18.168	23.9	82.7	1	2.40	18,168	23.9	82.7	1									
2.60	6,351	3.0	91.8	1	2.51	4,929	2.5	89.9	1	2.53	15,353	6.9	100.0	1	4.01	9,674	6.5	100.0	1	2.60	77,704	77.704	23.9	92.3	1	2.60	77,704	23.9	92.3	1									
2.64	17,401	8.2	100.0	1	3.10	19,613	10.1	100.0	1	3.33	15,353	6.9	100.0	1	4.10	9,674	6.5	100.0	1	3.25	62,641	62.641	23.9	100.0	1	3.25	62,641	23.9	100.0	1									
1.96	213,142	100.0	100.0	15	1.95	193,408	100.0	100.0	15	1.87	223,879	100.0	100.0	15	2.07	177,465	100.0	100.0	15	1.96	807,894	807.894	100.0	100.0	15	1.96	807,894	100.0	100.0	15									

TABLE 37.—Total "Revised" supply cost, by quarterly and yearly periods for 1918, for 15 operators producing bituminous coal in District No. 7 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.															
\$0.05	3,120	1.5	1.5	1	\$0.05	4,311	2.2	2.2	1	\$0.04	4,886	2.2	2.2	1	\$0.05	2,884	1.6	1.6	1	\$0.05	11,403	1.4	1.4	1	\$0.05	11,403	1.4	1.4	1	\$0.05	11,403	1.4	1.4	1	\$0.05	11,403	1.4	1.4	1										
.10	5,255	2.5	4.0	1	.06	2,539	1.3	3.5	1	.06	2,860	1.3	3.5	1	.07	3,746	2.1	5.7	1	.07	3,746	2.1	5.7	1	.07	3,746	2.1	5.7	1	.07	3,746	2.1	5.7	1	.07	3,746	2.1	5.7	1										
.11	21,754	10.2	14.2	1	.18	19,613	10.1	13.6	1	.11	61,961	27.7	31.2	1	.09	6,170	3.5	7.2	1	.15	135,112	16.7	20.4	1	.15	135,112	16.7	20.4	1	.15	135,112	16.7	20.4	1	.15	135,112	16.7	20.4	1										
.14	20,667	13.9	28.1	1	.20	24,895	12.9	26.5	1	.12	45,220	20.2	51.4	1	.14	19,231	10.8	18.0	1	.23	82,041	7.7	28.1	1	.23	82,041	7.7	28.1	1	.23	82,041	7.7	28.1	1	.23	82,041	7.7	28.1	1										
.15	17,401	8.2	36.3	1	.21	54,410	28.1	54.6	1	.14	5,138	2.3	53.7	1	.17	35,330	19.9	37.9	1	.24	23,754	2.9	31.0	1	.24	23,754	2.9	31.0	1	.24	23,754	2.9	31.0	1	.24	23,754	2.9	31.0	1										
.24	6,841	2.7	39.0	1	.22	7,543	3.9	58.5	1	.21	9,386	4.2	57.9	1	.26	48,975	27.6	85.5	1	.24	227,010	24.1	59.1	1	.24	227,010	24.1	59.1	1	.24	227,010	24.1	59.1	1	.24	227,010	24.1	59.1	1										
.25	19,650	9.2	48.2	2	.26	8,246	4.3	62.8	1	.28	18,419	8.2	66.1	1	.34	9,674	5.5	71.0	1	.26	113,466	14.0	73.1	2	.26	113,466	14.0	73.1	2	.26	113,466	14.0	73.1	2	.26	113,466	14.0	73.1	2										
.27	6,799	3.2	55.0	1	.32	4,929	2.5	65.3	1	.29	4,491	2.0	68.1	1	.36	15,083	8.5	79.5	2	.33	28,756	3.6	76.7	1	.33	28,756	3.6	76.7	1	.33	28,756	3.6	76.7	1	.33	28,756	3.6	76.7	1										
.35	14,515	6.8	58.2	2	.35	7,623	4.0	69.3	1	.31	15,353	6.9	75.0	1	.45	13,073	7.4	86.9	1	.36	26,604	3.3	80.0	1	.35	26,604	3.3	80.0	1	.35	26,604	3.3	80.0	1	.35	26,604	3.3	80.0	1										
.40	72,339	33.9	92.1	2	.41	9,240	4.8	74.1	1	.38	7,091	3.2	78.2	1	.47	5,297	3.0	89.9	1	.38	32,657	4.0	86.3	1	.38	32,657	4.0	86.3	1	.38	32,657	4.0	86.3	1	.38	32,657	4.0	86.3	1										
.54	11,777	5.5	97.6	1	.46	12,858	6.6	80.7	1	.40	13,443	6.0	84.2	1	.50	3,640	2.0	91.9	1	.41	49,677	5.3	91.2	1	.41	49,677	5.3	91.2	1	.41	49,677	5.3	91.2	1	.41	49,677	5.3	91.2	1										
.57	5,024	2.4	100.0	1	.51	18,300	9.5	88.5	2	.45	10,027	4.5	96.3	1	.54	8,291	4.7	98.6	1	.49	28,306	3.5	100.0	1	.49	28,306	3.5	100.0	1	.49	28,306	3.5	100.0	1	.49	28,306	3.5	100.0	1										
.60					.47	8,363	3.7	100.0	1																																								
.28	213,142	100.0	100.0	15	.28	193,408	100.0	100.0	15	.22	223,879	100.0	100.0	15	.26	177,465	100.0	100.0	15	.26	807,894	100.0	100.0	15	.26	807,894	100.0	100.0	15	.26	807,894	100.0	100.0	15	.26	807,894	100.0	100.0	15										

TABLE 38.—Total "Revised" general expenses, by quarterly and yearly periods for 1918, for 15 operators producing bituminous coal in District No. 7 of the State of Ohio.

January-March, 1918, inclusive.							April-June, 1918, inclusive.							July-September, 1918, inclusive.							October-December, 1918, inclusive.							Year 1918.						
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.					
\$0.21	61,044	28.9	28.9	1	\$0.23	8,246	4.3	4.3	1	\$0.23	19,413	8.7	8.7	2	\$0.28	7,858	4.4	4.4	1	\$0.26	25,763	4.4	4.4	1	\$0.26	25,763	4.4	4.4	1	1				
.22	10,905	5.1	34.0	1	.27	54,410	28.1	32.4	1	.32	4,886	2.2	10.9	1	.34	48,975	27.6	32.0	1	.30	237,010	98.1	98.1	1	.30	237,010	98.1	98.1	1	1				
.24	3,120	1.5	25.5	1	.32	8,411	4.4	36.8	1	.33	61,981	32.2	38.6	1	.37	10,119	5.7	37.7	2	.31	32,637	4.0	36.5	1	.31	32,637	4.0	36.5	1	1				
.25	17,401	8.2	43.7	1	.33	4,311	2.2	39.0	1	.37	2,550	1.3	39.9	1	.40	19,321	10.8	48.5	2	.33	11,408	1.4	37.9	1	.33	11,408	1.4	37.9	1	1				
.26	8,164	3.8	47.5	1	.34	19,613	10.1	49.1	1	.38	63,639	28.4	68.3	1	.48	35,330	19.9	68.4	1	.40	157,943	19.6	67.5	2	.40	157,943	19.6	67.5	2	1				
.27	5,841	2.7	50.2	1	.35	2,539	1.3	50.4	1	.40	15,353	6.9	75.2	2	.50	8,746	2.1	70.5	1	.47	153,593	19.0	76.5	2	.47	153,593	19.0	76.5	2	1				
.28	21,754	10.2	60.4	1	.38	3,892	2.0	52.4	1	.42	8,343	3.7	78.9	1	.51	8,291	4.7	75.2	1	.48	285,306	3.5	80.0	1	.48	285,306	3.5	80.0	1	1				
.29	5,255	2.5	62.9	1	.39	24,895	12.9	65.3	1	.45	13,443	6.0	84.9	1	.55	6,170	3.5	84.2	1	.50	39,439	4.9	84.9	1	.50	39,439	4.9	84.9	1	1				
.30	17,046	8.0	70.9	2	.40	18,300	9.5	74.8	1	.61	10,837	4.7	91.9	1	.63	9,674	5.0	89.2	1	.54	23,754	2.9	87.8	1	.54	23,754	2.9	87.8	1	1				
.31	11,777	5.5	76.4	1	.47	6,038	3.4	78.2	1	.67	6,988	3.4	95.1	1	.68	3,640	2.0	90.6	1	.64	42,677	5.3	93.1	1	.64	42,677	5.3	93.1	1	1				
.32	13,769	6.5	82.9	2	.52	22,098	11.4	89.6	2	.66	7,091	3.2	95.1	1	.78	5,988	4.2	92.8	1	.64	26,804	3.3	96.4	1	.64	26,804	3.3	96.4	1	1				
.33	6,799	3.2	86.1	1	.56	7,443	3.9	93.5	1	.67	6,594	2.9	98.0	1	.83	7,408	4.2	97.0	1	.66	26,766	3.6	100.0	1	.66	26,766	3.6	100.0	1	1				
.34	26,657	13.9	100.0	1	.60	7,628	4.0	97.5	1	.68	4,491	2.0	100.0	1	.92	5,397	3.0	100.0	1	.83	26,766	3.6	100.0	1	.83	26,766	3.6	100.0	1	1				
.40	213,142	100.0	100.0	15	.38	193,408	100.0	100.0	15	.40	223,879	100.0	100.0	15	.48	177,465	100.0	100.0	15	.41	807,894	100.0	100.0	15	.41	807,894	100.0	100.0	15	15				

TABLE 39.—Total "Revised" f. o. b. mine cost, by quarterly and yearly periods for 1918, for 15 operators producing bituminous coal in District No. 7 of the State of Ohio.

January-March, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.															
2.14	61,044	28.9	28.9	1	2.02	54,410	28.1	28.1	1	2.18	61,981	27.7	27.7	1	2.35	51,869	29.2	29.2	2	2.35	227,010	28.1	28.1	2	2.35	227,010	28.1	28.1	1										
2.22	8,120	1.5	30.4	1	2.20	9,628	4.3	31.5	1	2.19	45,220	20.2	47.9	1	2.39	8,291	4.7	33.9	1	2.36	11,408	1.4	29.6	1	2.36	11,408	1.4	29.6	1										
2.37	8,745	4.1	34.5	1	2.27	9,246	4.2	35.8	1	2.43	9,386	4.2	52.1	1	2.40	6,170	3.6	37.4	1	2.40	25,762	4.4	33.9	1	2.40	25,762	4.4	33.9	1										
2.38	10,905	6.1	36.6	1	2.46	2,539	1.2	37.1	1	2.44	8,303	3.7	55.8	1	2.70	43,198	24.3	61.7	2	2.42	28,306	3.5	37.4	2	2.42	28,306	3.5	37.4	1										
2.42	19,866	3.7	41.0	1	2.51	24,865	12.9	50.0	1	2.64	2,850	1.3	57.1	1	2.71	7,225	4.1	65.8	1	2.51	135,112	16.7	54.1	1	2.51	135,112	16.7	54.1	1										
2.55	5,841	2.7	47.3	1	2.64	20,451	10.0	60.0	2	2.65	7,091	3.2	60.3	1	2.94	19,231	10.8	76.6	1	2.59	38,756	3.6	57.7	1	2.59	38,756	3.6	57.7	1										
2.77	5,024	2.4	49.7	1	2.83	7,643	3.9	64.3	1	2.85	4,886	2.2	62.5	1	3.06	3,746	2.1	78.7	1	2.72	36,420	4.9	62.6	1	2.72	36,420	4.9	62.6	1										
2.78	5,255	2.5	52.2	1	2.69	9,240	4.8	69.3	1	2.62	5,133	2.3	61.8	1	3.07	5,297	3.0	81.7	1	2.76	18,198	2.3	64.9	1	2.76	18,198	2.3	64.9	1										
2.79	29,667	13.9	66.1	1	2.80	4,311	2.2	71.5	1	2.68	10,427	4.5	69.3	1	3.14	7,405	4.2	85.9	1	2.80	42,677	5.3	70.2	1	2.80	42,677	5.3	70.2	1										
2.87	33,531	16.7	81.8	2	2.86	8,411	4.4	75.9	1	2.69	10,037	4.7	80.0	1	3.19	5,668	3.2	88.1	1	2.85	51,138	6.3	76.5	1	2.85	51,138	6.3	76.5	1										
3.03	9,799	3.2	85.0	1	3.10	8,962	2.0	77.9	1	2.79	10,337	4.7	80.0	1	3.34	6,061	3.4	92.5	1	2.92	26,604	2.9	82.7	1	2.92	26,604	2.9	82.7	1										
3.05	9,164	3.0	88.8	1	3.36	18,300	9.5	87.4	1	3.01	6,594	2.9	82.9	1	3.42	3,640	2.0	94.5	1	2.99	28,754	9.6	92.3	1	2.99	28,754	9.6	92.3	1										
3.32	6,351	2.0	91.8	1	3.45	3,929	2.5	88.9	1	3.11	13,419	2.0	91.1	1	4.86	9,674	5.5	100.0	1	3.05	77,704	7.7	100.0	1	3.05	77,704	7.7	100.0	1										
3.53	17,401	8.2	100.0	1	3.53	19,613	10.1	100.0	1	4.04	15,333	6.9	100.0	1	.....	.....	.....	.....	.....	3.87	62,041	7.7	100.0	1	3.87	62,041	7.7	100.0	1										
2.64	213,142	100.0	100.0	15	2.61	198,408	100.0	100.0	15	2.49	223,879	100.0	100.0	15	2.81	177,465	100.0	100.0	15	2.63	807,894	100.0	100.0	15	2.63	807,894	100.0	100.0	15										

COAL.

TABLE 40.—Total sales realization, by quarterly and yearly periods for 1918, for 15 operators producing bituminous coal in District No. 7 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.																																																																																																																																																																																																																																																																																																																																																																		
Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0





## COST REPORTS OF FEDERAL TRADE COMMISSION.

TABLE 41.—Total "Revised" labor cost, by quarterly and yearly periods for 1918, for 67 operators producing bituminous coal in District No. 8 of the State of Ohio—Continued.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.																				
1.54	30,007	2.3	83.4	1	81.43	81,985	1.6	91.4	1	81.43	121,985	2.2	92.5	2	81.46	93,899	2.1	91.4	1	81.46	93,899	2.1	91.4	1	81.46	93,899	2.1	91.4	1	81.46	93,899																		
1.56	91,679	2.3	83.7	2	1.45	66,481	1.3	92.7	2	1.44	21,783	.4	92.9	2	1.47	7,485	.2	91.6	1	1.47	7,485	.2	91.6	1	1.47	7,485	.2	91.6	1	1.47	7,485																		
1.57	12,244	.3	84.0	1	1.46	8,731	.2	92.9	1	1.51	10,984	.2	93.1	1	1.49	103,985	.2	93.6	1	1.49	103,985	.2	93.6	1	1.49	103,985	.2	93.6	1	1.49	103,985																		
1.60	19,441	.5	84.5	1	1.48	110,899	2.2	93.1	1	1.54	21,006	.4	93.5	1	1.50	17,242	.4	94.2	1	1.50	17,242	.4	94.2	1	1.50	17,242	.4	94.2	1	1.50	17,242																		
1.63	3,738	.1	84.6	1	1.49	67,718	1.3	93.4	1	1.56	23,507	.4	93.9	1	1.57	13,486	.3	94.2	1	1.57	13,486	.3	94.2	1	1.57	13,486	.3	94.2	1	1.57	13,486																		
1.64	60,625	1.6	85.2	2	1.50	23,311	.4	93.8	2	1.60	51,322	1.0	94.9	3	1.58	85,590	1.4	96.0	2	1.58	85,590	1.4	96.0	2	1.58	85,590	1.4	96.0	2	1.58	85,590																		
1.79	13,325	.3	85.5	1	1.52	19,903	.4	97.3	1	1.62	150,910	2.9	97.8	1	1.61	17,322	.5	98.4	1	1.61	17,322	.5	98.4	1	1.61	17,322	.5	98.4	1	1.61	17,322																		
1.84	5,963	.2	86.7	1	1.53	6,080	.1	97.3	1	1.63	7,172	.1	97.9	1	1.62	25,122	.5	98.9	1	1.62	25,122	.5	98.9	1	1.62	25,122	.5	98.9	1	1.62	25,122																		
1.88	4,267	.1	86.9	1	1.56	20,963	.4	98.1	1	1.64	7,097	.1	98.0	1	1.69	9,266	.3	97.5	1	1.69	9,266	.3	97.5	1	1.69	9,266	.3	97.5	1	1.69	9,266																		
2.03	9,236	.2	86.9	1	1.65	22,007	.4	98.1	1	1.74	82,300	.3	98.9	2	1.70	17,459	.3	98.1	1	1.70	17,459	.3	98.1	1	1.70	17,459	.3	98.1	1	1.70	17,459																		
2.26	5,015	.1	86.3	1	1.95	6,201	.1	98.3	1	1.75	17,594	.3	99.2	1	1.75	8,226	.3	98.2	1	1.75	8,226	.3	98.2	1	1.75	8,226	.3	98.2	1	1.75	8,226																		
2.47	5,985	.1	86.4	1	2.13	16,225	.3	98.6	1	1.93	14,061	.1	99.5	1	1.81	7,191	.1	98.5	1	1.81	7,191	.1	98.5	1	1.81	7,191	.1	98.5	1	1.81	7,191																		
2.61	5,223	.2	86.5	1	2.23	16,225	.3	98.6	1	2.08	11,490	.2	99.7	1	1.84	7,867	.1	98.5	1	1.84	7,867	.1	98.5	1	1.84	7,867	.1	98.5	1	1.84	7,867																		
3.24	2,450	.2	86.8	1	2.46	10,496	.2	98.9	1	2.26	12,356	.1	100.0	1	1.86	5,445	.1	98.5	1	1.86	5,445	.1	98.5	1	1.86	5,445	.1	98.5	1	1.86	5,445																		
3.42	6,456	.2	100.0	1	2.59	7,226	.2	100.0	1	2.74	5,045	.0	100.0	1	2.08	12,870	.3	99.0	1	2.08	12,870	.3	99.0	1	2.08	12,870	.3	99.0	1	2.08	12,870																		
					4.41	1,876	.0	100.0	1						2.09	8,943	.3	99.0	1	2.09	8,943	.3	99.0	1	2.09	8,943	.3	99.0	1	2.09	8,943																		
															2.39	4,790	.8	99.8	1	2.39	4,790	.8	99.8	1	2.39	4,790	.8	99.8	1	2.39	4,790																		
															2.49	5,039	.1	100.0	1	2.49	5,039	.1	100.0	1	2.49	5,039	.1	100.0	1	2.49	5,039																		
1.28	3,865,168	100.0	100.0	67	1.17	5,084,006	100.0	100.0	67	1.19	5,630,767	100.0	100.0	67	1.26	1,618,702	100.0	100.0	67	1.26	1,618,702	100.0	100.0	67	1.26	1,618,702	100.0	100.0	67	1.26	1,618,702																		

TABLE 42.—Total "Revised" supply cost, by quarterly and yearly periods for 1918, for 67 operators producing bituminous coal in District No. 8 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.															
\$0.05	3,788	7.4	7.5	1	\$0.02	5,379	0.1	0.1	1	\$0.05	406,978	7.5	7.5	1	\$0.02	7,195	0.1	0.1	1	\$0.02	7,195	0.1	0.1	1	\$0.04	22,389	0.1	0.1	1	\$0.04	22,389	0.1	0.1	1	\$0.04	22,389	0.1	0.1	1										
.12	283,588	7.4	7.5	4	.10	78,086	1.5	1.6	1	.07	7,027	1.1	7.6	1	.07	344,632	7.7	7.6	1	.07	344,632	7.7	7.6	1	.08	1,325,438	7.0	7.1	1	.08	1,325,438	7.0	7.1	1	.08	1,325,438	7.0	7.1	1										
.14	36,519	8.4	8.4	1	.13	10,670	4.5	6.1	1	.10	10,884	1.1	7.8	1	.14	30,344	7.5	8.3	1	.14	30,344	7.5	8.3	1	.16	6,100	0.0	7.1	1	.16	6,100	0.0	7.1	1	.16	6,100	0.0	7.1	1										
.15	328,280	8.5	10.9	2	.13	10,670	4.5	6.1	1	.11	83,026	1.5	9.3	1	.15	7,867	7.2	8.5	1	.15	7,867	7.2	8.5	1	.17	1,430,032	7.6	15.1	2	.17	1,430,032	7.6	15.1	2	.17	1,430,032	7.6	15.1	2										
.16	175,003	4.6	21.5	2	.14	408,148	8.0	14.3	2	.11	90,085	1.8	11.1	2	.16	262,218	4.8	13.3	2	.16	262,218	4.8	13.3	2	.18	1,464,069	7.7	22.8	3	.18	1,464,069	7.7	22.8	3	.18	1,464,069	7.7	22.8	3										
.18	54,208	1.4	22.9	3	.15	181,723	3.5	17.8	3	.12	286,344	4.4	16.5	3	.18	610,728	13.2	26.5	3	.18	610,728	13.2	26.5	3	.19	436,276	2.3	25.1	3	.19	436,276	2.3	25.1	3	.19	436,276	2.3	25.1	3										
.19	36,103	1.0	23.9	3	.16	181,723	3.5	17.8	3	.13	284,884	5.2	20.7	3	.19	276,097	5.9	32.4	3	.19	276,097	5.9	32.4	3	.20	1,376,978	7.2	32.3	3	.20	1,376,978	7.2	32.3	3	.20	1,376,978	7.2	32.3	3										
.20	691,931	18.0	41.9	6	.17	6,201	1.7	21.0	6	.16	655,064	12.1	32.8	6	.20	6,105	6.1	32.5	6	.20	6,105	6.1	32.5	6	.22	1,324,760	8.1	40.4	4	.22	1,324,760	8.1	40.4	4	.22	1,324,760	8.1	40.4	4										
.21	122,456	3.1	45.0	3	.18	98,787	1.7	22.7	3	.17	301,532	5.6	38.4	3	.21	39,447	1.9	34.4	3	.21	39,447	1.9	34.4	3	.23	1,030,324	2.2	42.6	5	.23	1,030,324	2.2	42.6	5	.23	1,030,324	2.2	42.6	5										
.22	35,537	0.9	45.9	3	.19	255,643	5.0	27.7	4	.18	77,731	1.4	39.8	4	.22	346,662	7.6	42.0	4	.22	346,662	7.6	42.0	4	.24	1,030,306	8.9	51.5	6	.24	1,030,306	8.9	51.5	6	.24	1,030,306	8.9	51.5	6										
.23	54,731	1.4	47.3	3	.20	392,711	7.7	35.4	4	.20	82,968	1.5	41.3	4	.23	42,374	2.9	45.8	4	.23	42,374	2.9	45.8	4	.26	370,732	3.4	54.9	6	.26	370,732	3.4	54.9	6	.26	370,732	3.4	54.9	6										
.24	283,242	7.6	54.9	4	.21	35,646	0.5	35.9	4	.21	28,574	0.6	42.0	4	.24	135,414	2.9	46.3	4	.24	135,414	2.9	46.3	4	.28	97,868	1.1	60.6	6	.28	97,868	1.1	60.6	6	.28	97,868	1.1	60.6	6										
.25	53,850	1.4	56.3	2	.22	460,800	9.1	45.0	5	.22	37,574	0.6	42.6	5	.25	21,480	0.9	46.4	5	.25	21,480	0.9	46.4	5	.30	351,532	1.9	62.5	8	.30	351,532	1.9	62.5	8	.30	351,532	1.9	62.5	8										
.26	66,715	1.7	58.0	2	.23	478,156	10.0	55.0	5	.23	61,035	1.3	43.7	5	.26	31,337	1.7	47.1	5	.26	31,337	1.7	47.1	5	.31	150,350	1.8	63.3	9	.31	150,350	1.8	63.3	9	.31	150,350	1.8	63.3	9										
.27	225,141	5.8	63.8	3	.24	838,177	6.7	61.7	6	.24	501,591	9.2	54.7	6	.27	31,753	1.3	48.3	6	.27	31,753	1.3	48.3	6	.33	853,183	4.4	67.7	7	.33	853,183	4.4	67.7	7	.33	853,183	4.4	67.7	7										
.28	134,649	3.5	65.8	3	.25	77,605	2.2	63.2	3	.25	31,753	0.5	56.2	3	.28	280,846	5.2	58.4	3	.28	280,846	5.2	58.4	3	.34	34,869	0.7	67.9	9	.34	34,869	0.7	67.9	9	.34	34,869	0.7	67.9	9										
.29	121,126	3.2	68.4	2	.26	121,126	2.2	65.4	2	.26	81,732	1.5	61.4	4	.29	280,846	5.2	58.4	4	.29	280,846	5.2	58.4	4	.35	180,100	1.0	68.9	9	.35	180,100	1.0	68.9	9	.35	180,100	1.0	68.9	9										
.30	30,925	0.8	71.4	4	.27	121,126	2.2	65.4	2	.27	81,732	1.5	61.4	4	.30	528,519	11.3	72.4	4	.30	528,519	11.3	72.4	4	.36	416,034	2.6	76.3	9	.36	416,034	2.6	76.3	9	.36	416,034	2.6	76.3	9										
.31	114,933	3.0	74.4	4	.28	121,126	2.2	65.4	2	.28	280,846	5.2	58.4	4	.31	472,899	9.2	73.5	5	.31	472,899	9.2	73.5	5	.37	590,450	2.2	82.1	10	.37	590,450	2.2	82.1	10	.37	590,450	2.2	82.1	10										
.32	7,592	0.2	74.6	1	.29	472,899	9.2	73.5	5	.29	59,014	1.1	73.5	5	.32	95,742	1.5	62.1	5	.32	95,742	1.5	62.1	5	.38	922,272	4.9	87.0	11	.38	922,272	4.9	87.0	11	.38	922,272	4.9	87.0	11										
.33	34,717	0.9	74.8	1	.30	85,873	1.5	76.1	1	.30	59,014	1.1	73.5	5	.33	95,744	1.5	62.1	5	.33	95,744	1.5	62.1	5	.39	450,747	2.4	86.8	11	.39	450,747	2.4	86.8	11	.39	450,747	2.4	86.8	11										
.34	8,717	0.2	74.8	1	.31	85,873	1.5	76.1	1	.31	59,014	1.1	73.5	5	.34	95,744	1.5	62.1	5	.34	95,744	1.5	62.1	5	.41	231,056	0.4	83.4	11	.41	231,056	0.4	83.4	11	.41	231,056	0.4	83.4	11										
.35	153,169	4.0	78.8	2	.32	64,155	1.3	77.5	2	.32	470,513	8.5	82.0	6	.35	95,744	1.5	62.1	6	.35	95,744	1.5	62.1	6	.42	1,450,747	1.1	90.1	12	.42	1,450,747	1.1	90.1	12	.42	1,450,747	1.1	90.1	12										
.36	124,962	3.3	82.1	2	.33	64,155	1.3	77.5	2	.33	470,513	8.5	82.0	6	.36	95,744	1.5	62.1	6	.36	95,744	1.5	62.1	6	.43	590,450	2.2	82.1	10	.43	590,450	2.2	82.1	10	.43	590,450	2.2	82.1	10										
.37	222,023	5.8	87.9	3	.34	73,721	1.4	78.4	3	.34	73,721	1.4	78.4	3	.37	226,981	4.9	63.4	3	.37	226,981	4.9	63.4	3	.44	281,447	0.5	91.4	12	.44	281,447	0.5	91.4	12	.44	281,447	0.5	91.4	12										
.38	60,423	1.6	89.5	1	.35	89,879	2.4	80.6	1	.35	35,227	0.7	84.0	1	.38	226,981	4.9	63.4	3	.38	226,981	4.9	63.4	3	.45	1,450,747	1.1	90.1	12	.45	1,450,747	1.1	90.1	12	.45	1,450,747	1.1	90.1	12										
.39	60,423	1.6	89.5	1	.36	89,879	2.4	80.6	1	.36	35,227	0.7	84.0	1	.39	226,981	4.9	63.4	3	.39	226,981	4.9	63.4	3	.46	281,447	0.5	91.4	12	.46	281,447	0.5	91.4	12	.46	281,447	0.5	91.4	12										
.40	13,933	0.4	90.9	1	.37	110,839	2.4	80.6	1	.37	132,214	2.5	86.5	1	.40	226,981	4.9	63.4	3	.40	226,981	4.9	63.4	3	.47	1,450,747	1.1	90.1	12	.47	1,450,747	1.1	90.1	12	.47	1,450,747	1.1	90.1	12										
.41	34,497	0.9	90.9	1	.38	89,879	2.4	80.6	1	.38	132,214	2.5	86.5	1	.41	226,981	4.9	63.4	3	.41	226,981	4.9	63.4	3	.48	281,447	0.5	91.4	12	.48	281,447	0.5	91.4	12	.48	281,447	0.5	91.4	12										
.42	34,497	0.9	90.9	1	.39	89,879	2.4	80.6	1	.39	132,214	2.5	86.5	1	.42	226,981	4.9	63.4	3	.42	226,981	4.9	63.4	3	.49	281,447	0.5	91.4	12	.49	281,447	0.5	91.4	12	.49	281,447	0.5	91.4	12										
.43	268,870	6.5	97.5	2	.40	268,870	6.5	97.5	2	.40	268,870	6.5	97.5	2	.43	226,981	4.9	63.4	3	.43	226,981	4.9	63.4	3	.50	281,447	0.5	91.4	12	.50	281,447	0.5	91.4	12	.50	281,447	0.5	91.4	12										
.50	268,870	6.5	97.5	2	.41	268,870	6.5	97.5	2	.41	268,870	6.5	97.5	2	.44	226,981	4.9	63.4	3	.44	226,981	4.9	63.4	3	.51	281,447	0.5	91.4	12	.51	281,447	0.5	91.4	12	.51	281,447	0.5	91.4	12										
.51	8,775	0.2	97.7	1	.42	268,870	6.5	97.5	2	.42	268,870	6.5	97.5	2	.45	226,981	4.9	63.4	3	.45	226,981	4.9	63.4	3	.52	281,447	0.5	91.4	12	.52	281,447	0.5	91.4	12	.52	281,447	0.5	91.4	12										
.52	8,775	0.2	97.7	1	.43	268,870	6.5	97.5	2	.43	268,870	6.5	97.5	2	.46	226,981	4.9	63.4	3	.46	226,981	4.9	63.4	3	.53	281,447	0.5	91.4	12	.53	281,447	0.5	91.4	12	.53	281,447	0.5	91.4	12										
.53	8,775	0.2	97.7	1	.44	268,870	6.5	97.5	2	.44	268,870	6.5	97.5	2	.47	226,981	4.9	63.4	3	.47	226,981	4.9	63.4	3	.54	281,447	0.5	91.4	12	.54	281,447	0.5	91.4	12	.54	28													



TABLE 43.—Total "Revised" general expenses, by quarterly and yearly periods for 1918, for 67 operators producing bituminous coal in District No. 8 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.																				
30.08	34,710	0.9	0.9	1	30.08	39,367	0.8	0.8	1	30.06	4,130	0.1	0.1	1	30.03	7,867	0.2	0.2	1	30.06	16,223	0.1	0.1	1	30.06	16,223	0.1	0.1	1	30.06	16,223	0.1	0.1	1															
11	3,756	1.0	1.9	1	13	174,382	3.4	4.2	1	09	53,117	0.6	0.7	1	08	29,010	0.6	0.8	1	08	138,224	0.7	0.7	1	08	138,224	0.7	0.7	1	08	138,224	0.7	0.7	1															
13	7,392	2.2	4.1	1	14	1,576	0.4	4.2	1	12	85,056	1.5	2.2	1	13	5,445	0.1	1.6	1	13	96,235	0.5	0.5	1	13	96,235	0.5	0.5	1	13	96,235	0.5	0.5	1															
18	272,302	6.0	8.1	1	15	396,448	7.7	11.9	1	13	30,344	0.7	2.3	1	15	30,344	0.7	10.5	1	15	1,651,531	8.7	8.7	1	15	1,651,531	8.7	8.7	1	15	1,651,531	8.7	8.7	1															
19	129,456	3.2	11.3	3	16	104,176	2.0	13.9	3	13	7,882	0.1	2.3	3	16	415,306	8.9	10.6	3	16	587,814	3.1	13.1	3	16	587,814	3.1	13.1	3	16	587,814	3.1	13.1	3															
20	388,972	10.1	21.4	5	17	231,193	4.3	18.4	5	13	181,030	3.3	12.7	5	17	189,499	4.1	14.6	5	17	985,418	5.2	18.3	5	17	985,418	5.2	18.3	5	17	985,418	5.2	18.3	5															
21	471,670	12.3	33.7	3	18	221,810	4.4	22.8	3	16	69,971	1.3	14.0	3	18	34,559	0.7	15.3	3	18	685,188	3.6	21.9	3	18	685,188	3.6	21.9	3	18	685,188	3.6	21.9	3															
22	272,193	6.0	39.7	1	19	366,927	7.2	30.0	1	16	312,958	5.7	19.7	1	19	18,365	0.4	15.7	1	19	2,639,750	13.9	35.8	1	19	2,639,750	13.9	35.8	1	19	2,639,750	13.9	35.8	1															
23	90,971	2.4	42.1	1	20	482,786	9.5	39.5	4	18	527,575	9.7	29.4	4	20	53,744	1.1	17.8	4	20	1,483,837	9.8	36.6	4	20	1,483,837	9.8	36.6	4	20	1,483,837	9.8	36.6	4															
25	23,922	0.7	43.8	1	21	41,157	0.9	40.4	1	18	306,946	5.7	35.1	1	21	53,744	1.1	17.8	1	21	1,808,060	9.6	46.2	1	21	1,808,060	9.6	46.2	1	21	1,808,060	9.6	46.2	1															
26	23,962	0.7	45.5	1	22	158,785	3.1	43.5	1	19	60,144	1.3	36.4	1	22	40,027	0.9	30.4	1	22	353,271	1.8	48.0	1	22	353,271	1.8	48.0	1	22	353,271	1.8	48.0	1															
27	94,000	2.5	48.0	1	23	402,182	8.6	52.1	1	20	461,018	8.5	44.9	1	23	304,812	6.6	37.0	1	23	568,891	2.9	50.9	1	23	568,891	2.9	50.9	1	23	568,891	2.9	50.9	1															
28	282,316	7.4	55.4	3	24	90,020	1.8	53.9	3	22	146,836	2.7	47.6	3	24	41,018	5.2	42.2	3	24	1,197,941	6.3	57.2	3	24	1,197,941	6.3	57.2	3	24	1,197,941	6.3	57.2	3															
30	47,890	1.2	56.7	1	25	167,008	3.3	57.2	1	23	60,301	1.4	48.7	1	25	242,072	5.9	43.1	1	25	618,256	3.3	60.5	1	25	618,256	3.3	60.5	1	25	618,256	3.3	60.5	1															
31	298,683	7.8	64.5	3	26	684,833	13.4	70.6	3	24	204,770	3.8	52.5	3	26	32,180	0.7	43.8	3	26	1,015,179	5.4	65.9	3	26	1,015,179	5.4	65.9	3	26	1,015,179	5.4	65.9	3															
32	131,861	3.4	67.9	1	28	47,576	0.9	71.5	1	25	30,264	0.5	53.0	1	28	60,962	1.3	45.1	1	28	1,554,005	8.2	74.1	1	28	1,554,005	8.2	74.1	1	28	1,554,005	8.2	74.1	1															
33	25,301	0.7	68.6	1	29	87,308	1.7	73.2	1	26	425,012	7.9	60.9	1	29	483,207	10.5	55.6	1	29	27,108	1.7	75.9	1	29	27,108	1.7	75.9	1	29	27,108	1.7	75.9	1															
34	23,096	0.6	69.2	1	30	75,418	1.5	74.7	1	27	86,464	1.6	62.5	1	30	61,395	1.3	56.9	1	30	321,321	1.7	76.6	1	30	321,321	1.7	76.6	1	30	321,321	1.7	76.6	1															
38	52,003	1.3	81.1	1	31	328,796	6.5	81.2	1	28	109,248	2.0	64.5	1	31	440,337	9.5	66.4	1	31	147,029	7.0	83.6	1	31	147,029	7.0	83.6	1	31	147,029	7.0	83.6	1															
39	14,259	0.4	81.7	1	32	49,705	1.0	82.7	1	29	90,044	1.7	66.2	1	32	56,848	1.2	67.6	1	32	283,049	1.5	85.1	1	32	283,049	1.5	85.1	1	32	283,049	1.5	85.1	1															
41	9,289	0.2	81.9	1	33	26,615	0.5	82.7	1	30	262,933	4.8	71.0	1	33	129,040	2.8	70.4	1	33	45,247	0.2	85.3	1	33	45,247	0.2	85.3	1	33	45,247	0.2	85.3	1															
42	11,689	0.3	82.2	1	34	202,414	4.0	86.7	1	31	22,912	0.4	71.4	1	34	105,613	2.3	73.3	1	34	75,541	0.4	86.0	1	34	75,541	0.4	86.0	1	34	75,541	0.4	86.0	1															
43	6,383	0.2	82.5	1	35	17,711	0.3	87.0	1	32	14,612	0.3	76.1	1	35	26,303	0.6	73.8	1	35	64,888	0.3	86.0	1	35	64,888	0.3	86.0	1	35	64,888	0.3	86.0	1															
45	11,275	0.3	82.5	1	36	117,711	2.3	87.3	1	33	211,722	4.4	76.1	1	36	8,326	0.0	80.0	1	36	562,045	3.0	89.0	1	36	562,045	3.0	89.0	1	36	562,045	3.0	89.0	1															
46	107,019	3.0	85.3	1	37	55,811	1.1	88.4	1	34	317,609	7.2	78.3	1	37	35,745	0.8	80.8	1	37	45,455	0.8	89.8	1	37	45,455	0.8	89.8	1	37	45,455	0.8	89.8	1															
47	49,318	1.3	87.3	1	38	1,479	0.0	88.4	1	35	419,796	2.7	86.0	1	38	17,242	0.4	81.2	1	38	70,760	0.4	90.2	1	38	70,760	0.4	90.2	1	38	70,760	0.4	90.2	1															
49	43,933	1.1	88.4	1	39	6,041	0.0	88.4	1	36	294,243	3.7	89.7	1	39	35,745	0.8	80.8	1	39	231,447	1.2	91.4	1	39	231,447	1.2	91.4	1	39	231,447	1.2	91.4	1															
50	13,933	0.4	88.8	1	40	1,479	0.0	88.4	1	37	25,627	0.5	90.6	1	40	19,023	0.4	85.4	1	40	48,747	0.4	91.6	1	40	48,747	0.4	91.6	1	40	48,747	0.4	91.6	1															
51	72,678	1.9	90.7	2	41	18,099	0.3	88.8	1	38	15,785	0.2	90.6	1	41	52,949	1.2	86.6	1	41	52,949	1.2	91.6	1	41	52,949	1.2	91.6	1	41	52,949	1.2	91.6	1															
52	22,067	0.6	91.3	1	42	81,299	1.6	90.4	1	39	13,017	0.2	91.3	1	42	9,960	0.2	90.8	1	42	39,697	0.2	91.6	1	42	39,697	0.2	91.6	1	42	39,697	0.2	91.6	1															
53	12,264	0.3	91.6	1	43	77,605	1.5	91.9	1	40	28,441	0.5	91.3	1	43	44,933	1.0	87.8	1	43	252,589	1.3	93.1	1	43	252,589	1.3	93.1	1	43	252,589	1.3	93.1	1															

TABLE 43.—Total "Revised" general expenses, by quarterly and yearly periods for 1918, for 67 operators producing bituminous coal in District No. 8 of the State of Ohio—Continued.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.																																																																																																																																																																																																																																																																																																					
Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (tonnage (net tons).	Per cent of total.	Accum

	January-March, 1918, inclusive.	April-June, 1918, inclusive.	July-September, 1918, inclusive.	October-December, 1918, inclusive.	Year 1918.
Number of cases reported	10	16	17	17	60
Deaths	1	1	1	1	4
Total	11	17	18	18	64

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TABLE 44.—Total "Revised" f. o. b. mine cost, by quarterly and yearly periods for 1918, for 67 operators producing bituminous coal in District No. 8 of the State of Ohio—Continued.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.																				
2.13	19,481	5.5	77.8	1	\$1.91	104,651	3.2	90.0	3	\$1.96	7,027	1.1	80.2	1	\$2.17	69,896	1.5	85.0	1	\$2.17	69,896	1.5	85.0	1	\$2.17	69,896	1.5	85.0	1	\$2.17	69,896	1.5	85.0																
2.14	138,362	4.1	81.9	1	1.95	19,943	3.4	90.4	1	1.97	18,755	2.6	80.6	2	2.19	51,919	1.2	86.2	2	2.19	51,919	1.2	86.2	2	2.19	51,919	1.2	86.2	2	2.19	51,919	1.2	86.2																
2.15	10,432	3.0	82.2	1	1.99	1,479	1.0	90.4	2	1.98	30,728	4.6	81.2	2	2.20	31,317	1.2	86.9	2	2.20	31,317	1.2	86.9	2	2.20	31,317	1.2	86.9	2	2.20	31,317	1.2	86.9																
2.16	228,522	6.0	88.2	1	2.02	54,576	1.0	91.4	2	1.99	58,434	1.1	82.3	1	2.21	4,039	0.7	87.0	1	2.21	4,039	0.7	87.0	1	2.21	4,039	0.7	87.0	1	2.21	4,039	0.7	87.0																
2.17	778,323	2.0	90.2	1	2.04	10,872	1.6	93.2	1	2.03	173,036	3.2	82.6	1	2.26	30,927	0.4	87.7	2	2.26	30,927	0.4	87.7	2	2.26	30,927	0.4	87.7	2	2.26	30,927	0.4	87.7																
2.18	4,322	1.3	91.6	2	2.07	10,670	2.4	93.4	1	2.10	262,033	4.8	92.0	1	2.29	7,448	0.3	88.1	1	2.29	7,448	0.3	88.1	1	2.29	7,448	0.3	88.1	1	2.29	7,448	0.3	88.1																
2.19	167,819	4.3	91.9	1	2.09	73,211	2.2	94.0	1	2.12	24,891	1.5	92.2	1	2.31	17,332	0.1	92.6	1	2.31	17,332	0.1	92.6	1	2.31	17,332	0.1	92.6	1	2.31	17,332	0.1	92.6																
2.20	11,278	3.3	92.4	1	2.11	6,100	1.1	94.1	1	2.13	51,332	1.0	92.2	1	2.32	17,332	0.1	92.6	1	2.32	17,332	0.1	92.6	1	2.32	17,332	0.1	92.6	1	2.32	17,332	0.1	92.6																
2.21	318	0.1	92.9	1	2.14	55,811	1.1	98.4	1	2.18	4,350	0.1	93.8	1	2.44	61,335	0.1	93.8	1	2.44	61,335	0.1	93.8	1	2.44	61,335	0.1	93.8	1	2.44	61,335	0.1	93.8																
2.22	4,350	0.1	92.9	1	2.26	22,001	4.4	98.5	1	2.20	42,249	1.1	94.6	2	2.37	17,332	0.1	94.9	1	2.37	17,332	0.1	94.9	1	2.37	17,332	0.1	94.9	1	2.37	17,332	0.1	94.9																
2.23	12,363	3.5	97.1	1	2.36	6,201	1.1	98.5	1	2.31	58,579	1.1	95.7	2	2.40	49,670	0.1	94.9	1	2.40	49,670	0.1	94.9	1	2.40	49,670	0.1	94.9	1	2.40	49,670	0.1	94.9																
2.24	14,259	4.0	97.4	1	2.62	22,001	4.4	98.5	1	2.32	12,018	2.3	98.0	2	2.41	17,332	0.1	94.9	2	2.41	17,332	0.1	94.9	2	2.41	17,332	0.1	94.9	2	2.41	17,332	0.1	94.9																
2.25	8,775	2.5	98.1	1	2.83	5,131	1.1	99.4	2	2.36	17,103	8.8	99.1	2	2.78	17,103	8.8	99.1	2	2.78	17,103	8.8	99.1	2	2.78	17,103	8.8	99.1	2	2.78	17,103	8.8	99.1																
2.26	13,755	3.8	98.4	1	3.05	5,131	3.0	99.7	1	2.39	44,918	8.9	99.1	1	2.78	17,103	8.8	99.1	1	2.78	17,103	8.8	99.1	1	2.78	17,103	8.8	99.1	1	2.78	17,103	8.8	99.1																
2.27	21,999	6.0	99.1	1	3.24	13,996	3.0	99.7	1	2.43	836	0.0	99.1	1	2.81	756	0.0	98.3	1	2.81	756	0.0	98.3	1	2.81	756	0.0	98.3	1	2.81	756	0.0	98.3																
2.28	5,585	1.6	99.1	1	3.73	10,196	0.2	99.9	1	2.56	3,031	0.1	99.2	1	2.63	12,870	0.3	98.6	1	2.63	12,870	0.3	98.6	1	2.63	12,870	0.3	98.6	1	2.63	12,870	0.3	98.6																
3.08	5,615	1.6	99.3	1	3.80	10,196	0.2	99.9	1	2.61	17,321	0.1	99.2	1	2.96	8,943	0.2	98.8	1	2.96	8,943	0.2	98.8	1	2.96	8,943	0.2	98.8	1	2.96	8,943	0.2	98.8																
3.26	3,243	0.9	99.3	1	3.82	10,196	0.2	99.9	1	2.83	11,490	0.2	99.7	1	2.98	35,745	0.8	99.6	1	2.98	35,745	0.8	99.6	1	2.98	35,745	0.8	99.6	1	2.98	35,745	0.8	99.6																
3.79	8,884	2.5	99.7	1	4.71	7,226	0.1	100.0	1	3.94	12,355	0.2	99.9	1	3.25	4,790	0.1	99.7	1	3.25	4,790	0.1	99.7	1	3.25	4,790	0.1	99.7	1	3.25	4,790	0.1	99.7																
3.96	2,359	0.7	99.7	1	5.22	1,766	0.0	100.0	1	4.20	3,911	0.1	100.0	1	3.47	5,039	0.2	100.0	1	3.47	5,039	0.2	100.0	1	3.47	5,039	0.2	100.0	1	3.47	5,039	0.2	100.0																
1.85	3,855,168	100.0	100.0	67	1.70	5,430,006	100.0	100.0	67	1.73	5,430,767	100.0	100.0	67	1.91	4,618,702	100.0	100.0	67	1.91	4,618,702	100.0	100.0	67	1.91	4,618,702	100.0	100.0	67	1.91	4,618,702	100.0	100.0																

TABLE 45.—Total sales realization, by quarterly and yearly periods for 1918, for 64 operators producing bituminous coal in District No. 8 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.																																																																																																																																																																																																																																																																																																																																																																																													
Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales ton



TABLE 45.—Total sales realization, by quarterly and yearly periods for 1918, for 64 operators producing bituminous coal in District No. 8 of the State of Ohio—Continued.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01																				
\$2.98	204,283	5.4	88.6	1	\$2.78	6,030	.1	91.6	1	\$2.76	262,833	4.9	92.5	1	\$2.71	4,790	.1	95.8	1	\$2.71	922,372	5.0	92.1	1	\$2.71	922,372	5.0	92.1	1																				
2.99	66,779	1.8	90.4	1	2.80	5,131	.1	91.7	1	2.81	10,470	.2	92.7	1	2.81	7,485	.2	96.0	1	2.76	34,899	3.7	93.3	1	2.76	34,899	3.7	93.3	1																				
3.00	11,217	.3	90.7	1	2.82	160,581	3.2	94.9	2	2.85	170,700	3.2	95.9	1	2.84	17,242	.4	96.4	1	2.84	687,076	3.7	96.0	1	2.84	687,076	3.7	96.0	1																				
3.02	171,217	4.6	95.3	1	2.84	5,743	.1	95.0	1	2.86	9,969	.2	96.3	1	2.86	9,969	.2	96.4	1	2.87	28,405	.3	96.2	1	2.87	28,405	.3	96.2	1																				
3.06	6,746	.2	95.5	1	2.91	25,661	.5	95.5	1	3.00	9,730	.2	96.3	1	3.08	15,946	.4	97.0	1	3.08	13,631	.1	96.3	1	3.08	13,631	.1	96.3	1																				
3.10	40,112	1.1	96.6	1	2.97	101,229	3.9	99.4	1	3.09	3,611	.1	96.3	1	3.23	13,486	.3	97.3	1	3.09	19,131	.1	96.4	1	3.09	19,131	.1	96.4	1																				
3.20	12,882	.3	96.9	1	3.12	14,594	.3	99.7	1	3.16	12,028	.2	96.5	1	3.40	115,685	2.6	99.9	1	3.11	562,045	3.0	99.4	1	3.11	562,045	3.0	99.4	1																				
3.30	3,788	.1	97.0	1	3.23	10,802	.3	99.9	1	3.29	18,142	.3	96.8	1	4.50	6,757	.1	100.0	1	3.14	61,564	.3	99.7	1	3.14	61,564	.3	99.7	1																				
3.40	14,269	.4	97.5	1	4.03	5,045	.1	100.0	1		172,969	3.2	100.0	1						3.28	46,737	.3	100.0	1	3.28	46,737	.3	100.0	1																				
3.41	4,332	.1	97.6	1																																													
3.49	78,353	2.1	99.7	1																																													
3.57	10,421	.3	100.0	1																																													
2.62	3,751,755	100.0	100.0	64	2.40	4,956,977	100.0	100.0	64	2.51	5,336,347	100.0	100.0	64	2.51	4,525,384	100.0	100.0	64	2.49	18,570,413	100.0	100.0	64	2.49	18,570,413	100.0	100.0	64																				

## COAL.

TABLE 46.—Total "Revised" labor cost, by quarterly and yearly periods for 1918, for 11 operators producing bituminous coal in District No 9 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.					July-September, 1918, inclusive.					October-December, 1918, inclusive.					Year 1918.					
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
\$0.64	17,904	1.6	1.6	1	\$0.76	28,495	2.1	2.1	1	\$1.15	6,214	0.4	0.4	1	\$1.32	619,328	50.7	50.7	50.7	1	\$1.14	88,107	1.7	1.7	1	\$1.14	88,107	1.7	1.7	1
1.14	5,838	5.2	2.3	1	1.16	3,195	0.8	67.1	1	1.25	189,445	13.2	13.0	1	1.33	193,632	15.9	65.6	65.6	1	1.20	20,373	2.1	2.1	1	1.33	193,632	15.9	65.6	1
1.24	149,065	13.6	67.8	1	1.26	870,295	64.8	67.1	1	1.28	24,626	3.6	68.7	1	1.34	808,200	53.5	67.0	67.0	1	1.27	799,190	13.7	13.8	1	1.37	808,200	53.5	67.0	1
1.30	8,661	8	67.8	1	1.28	9,333	7.7	82.0	1	1.28	24,626	3.6	68.7	1	1.37	808,200	53.5	67.0	67.0	1	1.38	2,692,946	52.0	67.8	1	1.37	808,200	53.5	67.0	1
1.33	361,410	51.2	82.0	2	1.37	57,374	14.2	82.0	2	1.37	57,374	3.8	82.3	1	1.39	52,179	4.3	72.1	72.1	1	1.38	35,174	3.7	68.5	1	1.38	35,174	3.7	68.5	1
1.41	180,596	16.5	84.2	1	1.40	26,731	2.0	84.0	1	1.42	133,498	8.8	81.3	1	1.49	104,941	8.6	80.7	80.7	1	1.39	212,690	4.1	72.6	1	1.39	212,690	4.1	72.6	1
1.44	46,203	4.2	88.4	1	1.47	197,118	14.7	98.7	1	1.44	220,429	1.9	83.2	1	1.61	176,351	14.4	95.1	95.1	1	1.44	463,459	9.0	81.6	1	1.44	463,459	9.0	81.6	1
1.51	91,749	8.4	96.8	1	1.57	8,435	0.6	99.3	1	1.52	11,366	1.1	84.0	1	1.63	20,970	1.7	96.8	96.8	1	1.51	873,786	16.9	98.5	1	1.51	873,786	16.9	98.5	1
1.63	20,076	1.8	98.6	1	2.56	9,144	0.7	100.0	1	1.54	222,594	14.7	99.2	1	1.70	9,094	0.8	97.6	97.6	1	1.63	35,011	0.7	99.2	1	1.63	35,011	0.7	99.2	1
1.78	6,116	0.6	100.0	1	.....	.....	.....	.....	.....	1.62	6,955	0.5	100.0	1	2.18	13,529	1.1	98.7	98.7	1	2.30	43,552	0.8	100.0	1	2.30	43,552	0.8	100.0	1
2.13	8,654	0.8	.....	.....	.....	.....	.....	.....	.....	2.36	11,925	0.8	.....	.....	2.23	15,172	1.3	100.0	100.0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1.35	1,096,292	100.0	100.0	11	1.31	1,342,914	100.0	100.0	11	1.33	1,511,014	100.0	100.0	11	1.41	1,220,707	100.0	100.0	100.0	11	1.35	5,171,527	100.0	100.0	11	1.35	5,171,527	100.0	100.0	11

## COST REPORTS OF FEDERAL TRADE COMMISSION.

TABLE 47.—Total "Revised" supply cost, by quarterly and yearly periods for 1918, for 11 operators producing bituminous coal in District No. 9 of the State of Ohio.

Year 1918.									
January-March, 1918, inclusive.					April-June, 1918, inclusive.				
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
\$.09	8,654	0.8	0.8	1	\$.08	9,144	0.7	0.7	1
.15	187,386	16.5	17.3	1	.09	8,435	0.6	1.3	1
.17	17,904	1.6	18.9	1	.12	28,405	2.1	3.4	1
.18	240,814	22.0	40.9	2	.15	206,471	18.4	18.8	2
.20	570,071	52.0	92.9	2	.16	133,283	9.9	28.7	1
.22	11,974	1.1	94.0	1	.17	730,039	64.4	83.1	2
.24	46,303	4.2	98.2	1	.25	3,195	0.2	83.3	1
.27	20,076	1.8	100.0	1	.28	106,983	12.4	95.7	1
					.31	24,626	1.6	95.8	1
					.32	57,374	4.3	100.0	1
.19	1,086,292	100.0	100.0	11	.21	1,511,614	100.0	100.0	11
October-December, 1918, inclusive.					Year 1918.				
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
\$.12	13,829	1.1	1.1	1	\$.12	43,552	0.8	0.8	1
.14	9,034	.8	1.9	1	.13	35,011	.7	1.5	1
.18	619,328	50.7	32.6	1	.18	3,408,845	67.0	68.5	2
.20	176,251	14.3	67.0	1	.20	35,174	9.0	69.2	1
.23	10,205	.8	67.8	1	.24	463,459	9.0	78.2	1
.26	57,285	4.7	72.5	2	.25	97,226	1.9	80.1	1
.33	104,941	8.6	81.1	1	.26	20,373	1.4	80.5	1
.42	193,632	15.9	97.0	1	.28	298,797	5.8	86.3	2
.44	20,970	1.7	98.7	1	.29	709,130	13.7	100.0	1
.66	15,172	1.3	100.0	1					
					.21	5,171,527	100.0	100.0	11

TABLE 48.—Total "Revised" general expenses, by quarterly and yearly periods for 1918, for 11 operators producing bituminous coal in District No. 9 of the State of Ohio.

January-March, 1918, inclusive.					April-June, 1918, inclusive.					July-September, 1918, inclusive.					October-December, 1918, inclusive.					Year 1918.					
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
\$0.15	46,203	4.2	4.2	1	\$0.15	309,271	22.3	22.3	1	\$0.15	109,445	13.2	13.2	1	\$0.15	103,632	15.9	15.9	1	\$0.16	1,172,589	22.7	22.7	2	
.16	149,065	13.6	17.2	1	.16	146,334	4.3	26.6	1	.16	123,179	3.8	25.8	1	.16	132,179	4.3	26.8	1	.17	212,900	4.1	26.8	1	
.18	91,749	8.4	25.2	1	.20	703,308	52.4	79.7	1	.17	37,474	3.8	25.8	1	.20	104,841	8.3	34.2	1	.20	2,602,246	52.0	78.8	1	
.20	561,410	51.2	77.4	1	.21	197,118	14.7	93.7	1	.18	88,269	33.5	79.3	1	.21	619,328	50.7	79.5	1	.21	776,339	15.0	93.8	1	
.21	201,672	18.3	95.7	2	.24	26,751	2.7	96.7	1	.20	222,334	14.7	94.0	1	.24	176,251	14.4	84.3	1	.26	97,226	1.9	95.7	1	
.23	5,858	.5	96.2	1	.28	29,429	2.7	96.6	1	.23	5,106	1.9	93.9	1	.23	3,066	.4	84.3	1	.26	97,226	1.9	95.7	1	
.32	8,661	.8	97.0	1	.43	3,195	.2	96.6	1	.31	6,214	.4	96.3	1	.32	20,970	1.7	96.0	1	.33	35,174	.7	96.8	1	
.59	8,654	.8	97.8	1	.61	9,144	.7	97.3	1	.39	6,935	.5	96.8	1	.34	10,265	.8	96.8	1	.52	43,552	.8	97.6	1	
.69	6,116	.6	98.4	1	.63	8,135	.6	97.9	1	.52	11,366	.8	97.6	1	.42	13,829	1.1	97.9	1	.60	35,011	.7	98.3	1	
.83	17,904	1.6	100.0	1	.72	28,405	2.1	100.0	1	.53	11,925	.8	98.4	1	.60	9,091	.8	98.7	1	.77	86,107	1.7	100.0	1	
										.71	24,626	1.6	100.0	1	.91	15,172	1.3	100.0	1						
.21	1,006,292	100.0	100.0	11	.21	1,342,914	100.0	100.0	11	.20	1,511,014	100.0	100.0	11	.22	1,220,707	100.0	100.0	11	.20	5,171,527	100.0	100.0	11	

TABLE 49.—Total "Revised" f. o. b. mine cost, by quarterly and yearly periods for 1918, for 11 operators producing bituminous coal in District No. 9 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.																				
1.58	149,065	13.6	13.6	1	\$1.60	28,405	2.1	2.1	1	\$1.62	806,200	53.5	53.5	1	\$1.71	619,328	50.7	50.7	1	\$1.67	2,692,246	52.0	52.0	52.0	1	\$1.67	2,692,246	52.0	52.0	52.0																			
1.59	5,558	1.6	15.1	1	1.63	703,308	52.4	54.5	1	1.68	196,445	13.2	66.7	1	1.84	52,179	4.3	43.0	1	1.72	709,130	13.7	65.7	65.7	1	1.72	709,130	13.7	65.7	65.7																			
1.64	17,904	1.6	16.7	1	1.67	166,988	12.4	66.9	1	1.77	6,214	.4	67.1	1	1.89	5,106	.4	55.4	1	1.76	20,373	13.1	66.1	66.1	1	1.76	20,373	13.1	66.1	66.1																			
1.73	531,410	51.2	66.9	1	1.68	133,283	9.9	76.8	1	1.84	133,498	8.8	75.9	1	1.90	183,632	15.9	71.3	1	1.84	676,149	15.0	66.2	66.2	1	1.84	676,149	15.0	66.2	66.2																			
1.77	180,596	16.5	83.4	1	1.71	9,353	.7	77.5	1	1.86	67,374	3.8	79.7	1	1.94	10,305	1.0	80.5	1	1.90	778,559	15.0	66.2	66.2	1	1.90	778,559	15.0	66.2	66.2																			
1.82	8,661	.8	84.2	1	1.81	88,685	6.3	83.8	2	1.90	28,459	1.9	81.6	1	2.02	104,941	8.6	80.7	1	1.91	35,174	1.9	66.8	66.8	1	1.91	35,174	1.9	66.8	66.8																			
1.83	46,203	4.2	88.4	1	1.83	197,118	14.7	98.5	1	1.96	222,594	14.7	97.3	1	2.05	176,261	14.4	95.1	1	2.02	97,236	1.9	66.8	66.8	1	2.02	97,236	1.9	66.8	66.8																			
1.87	91,749	8.4	96.8	1	1.84	3,195	.2	98.7	1	2.19	11,366	.8	97.1	1	2.39	20,970	1.7	96.8	1	2.19	86,107	1.7	66.8	66.8	1	2.19	86,107	1.7	66.8	66.8																			
2.10	20,076	1.8	98.6	1	2.23	9,144	.6	99.3	1	2.22	6,965	.5	99.2	1	2.44	9,094	.8	97.6	1	2.37	36,011	.7	66.2	66.2	1	2.37	36,011	.7	66.2	66.2																			
2.69	6,116	1.8	99.2	1	3.23			100.0	1	3.08	11,925	.8	100.0	1	3.80			100.0	1	2.94	43,552	.8	66.2	66.2	1	2.94	43,552	.8	66.2	66.2																			
2.81	8,654	.8	100.0	1																																													
1.75	1,096,292	100.0	100.0	11	1.70	1,342,914	100.0	100.0	11	1.74	1,511,614	100.0	100.0	11	1.83	1,230,707	100.0	100.0	11	1.76	5,171,527	100.0	100.0	100.0	11	1.76	5,171,527	100.0	100.0	100.0																			

TABLE 50.—Total sales realization, by quarterly and yearly periods for 1918, for 11 operators producing bituminous coal in District No. 9 of the State of Ohio.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.																																																																																																																																																																																																																																																																																																																																																																																																		
Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons).

TABLE 51.—"Claimed" labor, supplies, general expenses and total f. o. b. mine cost for the year 1918, for 9 operators producing bituminous coal in District No. 1 of the State of Ohio.

Labor cost.					Supply cost.					General expenses.					Total f. o. b. mine cost.				
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
\$1.41	79,813	9.9	9.9	1	\$0.00	15,920	1.9	1.9	1	\$0.25	63,142	7.8	7.8	1	\$2.15	79,813	9.9	9.9	1
1.60	149,272	18.4	28.3	1	.19	79,813	9.9	11.8	1	.37	152,892	18.9	26.7	1	2.34	63,142	7.8	17.7	1
1.63	152,892	18.9	47.2	1	.24	149,272	18.4	30.2	1	.42	152,892	18.9	28.6	1	2.55	15,920	1.9	19.6	1
1.68	63,142	7.8	55.0	1	.28	15,406	1.9	32.1	1	.48	49,657	6.1	34.7	1	2.62	149,272	18.4	38.0	1
1.78	177,283	21.9	76.9	1	.29	177,283	21.9	54.0	1	.54	106,796	13.2	47.9	1	3.04	152,892	18.9	56.9	1
2.02	49,657	6.1	83.0	1	.31	63,142	7.8	61.8	1	.55	79,813	9.9	57.8	1	2.87	49,657	6.1	63.0	1
2.13	15,920	1.9	84.9	1	.35	106,796	13.2	75.0	1	.73	149,272	18.4	76.2	1	3.04	177,283	21.9	84.9	1
2.17	106,796	13.2	98.1	1	.37	49,657	6.1	81.1	1	.74	15,406	1.9	78.1	1	3.06	106,796	13.2	98.1	1
2.23	15,406	1.9	100.0	1	.62	152,892	18.9	100.0	1	.97	177,283	21.9	100.0	1	3.25	15,406	1.9	100.0	1
1.76	810,091	100.0	100.0	9	.34	810,091	100.0	100.0	9	.62	810,091	100.0	100.0	9	2.72	810,091	100.0	100.0	9

¹ Included in labor cost.

TABLE 52.—“Claimed” labor, supplies, general expenses and total f. o. b. mine cost for the year 1918, for 21 operators producing bituminous coal in District No. 2 of the State of Ohio.

Labor cost.						Supply cost.						General expenses.						Total f. o. b. mine cost.					
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.		Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.		Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.		Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
\$1.42	22,775	2.6	2.6	1		\$0.05	25,486	2.9	2.9	1		\$0.22	76,406	8.9	8.9	1		\$1.90	76,406	8.9	8.9	1	
1.50	76,406	8.9	11.5	1		.17	100,204	11.6	14.5	2		.31	12,848	1.5	10.4	8.9		1.97	22,775	2.6	20.4	11.5	
1.55	76,758	8.9	20.4	1		.18	76,406	8.9	23.4	2		.34	22,775	2.6	13.0	13.0		2.32	76,758	8.9	29.4	20.4	
1.60	22,259	2.6	23.0	1		.10	35,861	4.2	27.6	2		.40	81,809	8.5	22.5	22.5		2.34	25,486	2.9	32.3	23.3	
1.68	47,266	5.5	28.5	1		.21	45,034	5.2	32.8	2		.44	18,395	2.1	24.6	24.6		2.61	81,809	9.5	39.4	32.8	
1.78	59,767	6.9	35.4	1		.22	17,611	2.0	34.8	2		.45	22,000	2.6	27.2	27.2		2.67	56,540	6.6	43.5	39.4	
1.83	17,611	2.0	37.4	1		.27	16,152	1.9	36.7	1		.48	76,758	8.9	36.1	36.1		2.73	36,006	4.1	43.5	43.5	
2.04	81,809	9.5	46.9	1		.28	34,281	4.0	40.7	1		.51	218,156	25.3	61.4	61.4		3.03	192,709	22.4	65.9	65.9	
2.06	15,277	1.8	48.7	1		.29	76,758	8.9	49.6	1		.60	16,152	1.9	63.3	63.3		3.16	12,848	1.5	67.4	67.4	
2.12	18,395	2.1	50.8	1		.31	14,844	1.7	51.3	1		.61	34,281	4.0	67.3	67.3		3.29	16,152	1.9	69.3	69.3	
2.13	192,709	22.4	73.2	1		.35	15,277	1.8	53.1	1		.71	34,031	3.9	68.3	68.3		3.34	22,000	2.6	71.9	71.9	
2.17	46,427	5.4	78.6	1		.39	192,709	22.4	75.5	1		.72	46,427	5.4	73.2	73.2		3.54	15,277	1.8	73.7	73.7	
2.21	47,190	5.5	84.1	1		.40	47,266	5.5	81.0	1		.79	15,674	1.8	78.6	78.6		3.58	35,861	4.2	77.9	77.9	
2.26	22,000	2.6	86.7	1		.48	32,346	3.8	84.8	1		.86	22,259	2.6	80.4	80.4		3.64	79,612	9.3	87.2	87.2	
2.31	12,848	1.5	88.2	1		.50	15,674	1.8	86.6	1		.88	22,259	2.6	83.0	83.0		3.69	14,844	1.7	88.9	88.9	
2.36	16,152	1.9	90.1	1		.58	22,000	2.6	89.2	1		.89	35,861	4.2	87.2	87.2		3.72	46,427	5.4	94.3	94.3	
2.43	15,674	1.8	91.9	1		.50	34,031	3.9	93.1	1		.93	32,346	3.8	91.0	91.0		3.96	15,674	1.8	96.1	96.1	
2.44	35,861	4.2	96.1	1		.62	12,848	1.5	94.6	1		1.12	15,877	1.7	92.8	92.8			34,031	3.9	100.0	100.0	
2.66	34,031	3.9	100.0	1		.80	46,427	5.4	100.0	1		1.50	47,266	5.5	100.0	100.0							
1.98	861,215	100.0	100.0	21		.34	861,215	100.0	100.0	21		.61	861,215	100.0	100.0	100.0		2.93	861,215	100.0	100.0	100.0	





## COAL.

TABLE 54.—“Claimed” labor, supplies, general expenses, and total f. o. b. mine cost for the year 1918, for 10 operators producing bituminous coal in District No. 3a of the State of Ohio.

Labor cost.					Supply cost.					General expenses.					Total f. o. b. mine cost.				
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
\$1.19	45,418	16.5	16.5	1	\$0.07	11,615	4.2	4.2	1	\$0.18	20,319	7.4	7.4	1	\$1.96	45,418	16.5	16.5	1
1.25	37,027	13.4	29.9	1	.18	30,172	10.9	15.1	1	.31	31,733	11.5	18.9	1	2.07	37,027	13.4	29.9	1
1.50	28,463	10.3	40.2	1	.20	57,346	20.8	35.9	2	.38	18,490	6.7	25.6	1	2.11	28,463	10.3	40.2	1
1.60	11,615	4.2	44.4	1	.21	28,463	10.3	46.2	1	.40	28,463	10.3	35.9	1	2.12	20,319	7.4	47.6	1
1.72	43,830	15.9	60.3	1	.23	45,418	16.5	62.7	1	.41	43,830	15.9	51.8	1	2.26	11,615	4.2	51.8	1
1.74	68,921	25.0	85.3	3	.27	18,490	6.7	69.4	1	.50	45,418	16.5	68.3	1	2.39	18,490	6.7	58.5	1
1.85	31,733	11.5	96.8	1	.38	43,830	15.9	85.4	1	.59	11,615	4.2	72.5	1	2.51	43,830	15.9	74.4	1
2.22	8,802	3.2	100.0	1	.67	8,802	3.2	88.5	1	.62	37,027	13.4	96.8	1	2.83	31,733	11.5	85.9	1
						31,733	11.5	100.0	1	.95	30,172	10.9	100.0	1	2.87	30,172	10.9	96.8	1
										1.02	8,802	3.2		1	3.52	8,802	3.2	100.0	1
1.58	275,809	100.0	100.0	10	.30	275,809	100.0	100.0	10	.61	275,809	100.0	100.0	10	2.39	275,809	100.0	100.0	10

TABLE 55.—"Claimed" labor, supplies, general expenses, and total f. o. b. mine cost for the year 1918, for 20 operators producing bituminous coal in District No. 4 of the State of Ohio.

Labor cost.				Supply cost.				General expenses.				Total f. o. b. mine cost.							
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
40.63	246,532	11.2	11.2	1	80.10	75,354	3.4	3.4	1	81.58	75,354	3.4	3.4	1	81.58	75,354	3.4	3.4	1
1.27	254,476	11.6	22.8	1	11.16	18,387	8.8	4.2	1	1.66	254,476	11.6	15.0	1	1.66	254,476	11.6	15.0	1
1.32	75,354	3.4	26.2	1	14.14	14,365	7.7	4.9	1	1.70	338,778	15.4	30.4	2	1.70	338,778	15.4	30.4	2
1.34	18,387	8.8	27.0	1	15.15	70,924	3.2	8.1	1	2.26	32,731	1.6	32.0	2	2.00	126,730	5.8	36.2	2
1.35	26,720	1.2	28.2	1	19.15	12,904	6.6	8.7	1	3.32	81,932	3.8	37.8	2	2.03	246,532	11.2	47.4	2
1.40	358,778	15.4	43.6	1	21.22	44,130	2.0	10.7	1	3.37	32,731	1.6	56.3	2	2.07	14,365	7.7	48.1	2
1.46	72,196	3.8	40.4	1	22.22	254,476	11.6	22.3	1	4.47	30,469	1.4	59.1	1	2.17	72,196	3.3	51.4	1
1.45	44,150	2.0	54.7	1	25.52	338,778	15.4	37.7	1	4.48	30,469	1.4	63.4	1	2.24	26,720	1.2	52.6	1
1.45	30,478	1.4	56.1	1	30.31	221,395	3.3	41.0	1	4.49	30,469	1.4	80.6	1	2.24	44,150	2.0	54.6	1
1.56	255,478	11.6	67.7	1	31.31	24,058	10.1	52.2	2	5.51	378,612	17.2	80.6	1	2.40	255,478	11.6	66.2	1
1.59	378,612	17.2	84.9	1	32.32	255,178	11.6	63.8	1	5.56	30,937	1.4	82.0	1	2.40	18,387	8.8	67.0	1
1.63	14,365	0.6	88.6	1	33.33	358,612	17.2	81.0	1	5.66	44,150	2.0	84.0	1	2.43	449,540	20.4	87.4	2
1.69	67,400	2.9	90.5	1	35.35	37,187	2.6	83.6	2	5.78	63,400	2.9	86.9	1	2.56	94,665	4.3	92.3	1
1.73	18,386	0.9	91.4	1	37.37	63,400	2.9	86.5	1	5.87	23,028	1.1	88.0	1	2.63	30,957	1.4	93.7	1
1.82	27,058	1.1	92.5	1	40.40	208,532	11.2	97.7	1	5.93	246,532	11.2	99.2	1	2.65	18,386	0.9	94.6	1
1.85	30,465	1.3	93.8	1	41.41	30,937	1.4	98.1	1	5.95	18,387	8.8	100.0	1	2.71	30,469	1.4	96.0	1
1.88	30,469	1.4	96.2	1	46.46	18,386	0.9	100.0	1	6.01	18,387	8.8	100.0	1	2.82	63,400	2.9	98.9	1
2.05	12,944	0.6	100.0	1	100.00	18,386	0.9	100.0	1	100.00	18,387	8.8	100.0	1	2.91	23,058	1.1	100.0	1
1.41	2,196,544	100.0	100.0	20	.31	2,196,544	100.0	100.0	20	.41	2,196,544	100.0	100.0	20	2.13	2,196,544	100.0	100.0	20

TABLE 56.—“Claimed” labor, supplies, general expenses, and total f. o. b. mine cost for the year 1918, for 10 operators producing bituminous coal in District No. 5 of the State of Ohio.

Labor cost.					Supply cost.					General expenses.					Total f. o. b. mine cost.				
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
\$1.40	119,491	24.9	24.9	1	6.11	39,074	8.1	8.1	2	\$0.17	10,627	2.2	2.2	1	\$1.96	113,546	23.7	23.7	1
1.42	113,546	23.7	48.6	1	.14	68,984	14.4	22.5	1	.30	113,546	23.7	25.9	1	2.07	10,627	2.2	25.9	1
1.61	68,984	14.4	63.0	1	.18	31,008	6.5	26.0	1	.33	150,499	31.4	57.3	2	2.09	68,984	14.4	40.3	1
1.68	51,122	10.6	73.6	1	.24	131,691	28.1	57.1	2	.34	68,984	14.4	71.7	1	2.13	119,491	24.9	65.2	2
1.71	16,360	3.4	77.0	1	.33	16,360	3.4	60.5	1	.50	28,447	5.9	77.6	1	2.43	59,455	12.4	77.6	1
1.79	10,627	2.2	79.2	1	.35	51,122	10.6	71.1	1	.56	21,145	4.4	82.0	1	2.68	21,145	4.4	82.0	1
1.82	28,447	5.9	85.1	1	.38	19,383	4.0	75.1	1	.66	61,122	10.6	92.6	1	2.69	51,122	10.6	92.6	1
1.92	31,008	6.5	91.6	1	.40	119,491	24.9	100.0	1	.72	19,383	4.0	96.6	1	2.76	16,360	3.4	96.0	1
1.93	21,145	4.4	96.0	1										1	3.21	19,383	4.0	100.0	1
2.15	19,383	4.0	100.0	1															
1.60	480,123	100.0	100.0	10	.27	480,123	100.0	100.0	10	.40	480,123	100.0	100.0	10	2.27	480,123	100.0	100.0	10

COAL.

## COST REPORTS OF FEDERAL TRADE COMMISSION.

TABLE 57.—"Claimed" labor, supplies, general expenses, and total f. o. b. mine cost for the year 1918, for 54 operators producing bituminous coal in District No. 6 of the State of Ohio.

Labor cost.					Supply cost.					General expenses.					Total f. o. b. mine cost.				
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
1.23	24,791	0.6	0.0	1	\$0.02	40,922	1.0	1.0	1	\$0.05	14,476	0.4	0.4	1	\$1.65	14,476	0.4	0.4	1
1.24	116,569	2.9	3.5	1	.11	52,960	1.3	2.3	1	.11	12,691	.3	.7	1	1.67	116,569	2.9	3.3	1
1.31	196,086	3.0	6.5	1	.13	61,622	1.6	3.9	1	.14	20,078	.5	1.2	1	1.78	24,791	12.7	12.7	1
1.32	9,544	3	8.8	1	.14	33,418	1.0	4.9	1	.15	48,156	1.2	2.4	2	1.90	500,552	7.9	16.6	2
1.41	271,121	9.9	16.7	1	.16	30,989	0.8	6.7	1	.16	11,986	4.4	6.8	1	2.03	312,073	8.0	28.5	1
1.43	500,552	12.7	28.4	1	.18	168,541	4.2	9.9	1	.18	178,731	13.7	20.8	1	2.05	195,093	8.0	30.3	1
1.44	214,797	4	33.8	1	.19	153,130	1.4	11.3	1	.21	540,903	6.6	27.4	2	2.09	32,570	8.8	38.3	2
1.46	38,578	6	34.4	1	.20	117,368	2.9	14.2	1	.22	227,833	8.7	36.1	1	2.10	24,102	9.0	40.3	1
1.47	24,870	1.0	35.4	1	.21	119,348	3.1	17.8	1	.23	271,121	6.9	38.8	1	2.11	311,504	7.9	44.2	1
1.48	62,214	1.3	36.7	1	.22	26,016	1.5	18.0	1	.25	116,569	2.9	41.2	1	2.14	214,797	9.4	48.6	1
1.49	126,945	2.2	39.9	1	.26	69,288	1.6	33.5	1	.26	261,309	6.6	44.8	1	2.17	296,799	7.5	52.0	1
1.50	40,922	1.0	40.9	1	.27	65,473	1.6	35.1	1	.30	225,631	9.7	46.6	1	2.25	201,083	5.1	57.1	1
1.54	131,199	3.9	44.8	1	.30	32,570	7.6	43.5	1	.32	24,791	3.2	50.4	2	2.27	41,183	1.0	58.1	2
1.56	276,886	7.0	51.8	1	.31	18,883	0.5	44.0	1	.33	126,075	3.2	53.6	2	2.31	87,251	2.2	60.3	2
1.59	296,799	7.5	59.3	1	.32	106,066	2.9	49.0	1	.34	130,705	3.3	55.0	2	2.32	11,986	1.4	61.0	2
1.60	13,724	3	61.6	1	.35	111,824	15.7	67.6	1	.35	85,863	2.2	57.3	2	2.34	13,724	.3	61.3	2
1.61	87,251	2.2	64.0	1	.37	621,164	.4	68.0	1	.36	53,854	1.4	61.3	2	2.39	126,945	3.2	64.8	2
1.62	169,049	4.3	68.3	1	.38	17,102	.7	68.7	1	.37	159,968	4.0	65.3	2	2.42	12,691	.3	65.2	2
1.63	41,183	1.0	69.3	1	.39	36,531	.7	68.0	1	.39	157,884	4.0	67.5	2	2.49	15,586	.6	68.4	2
1.64	26,141	7	70.0	1	.43	12,691	.3	69.0	1	.40	87,055	2.2	70.0	3	2.50	124,698	3.2	68.4	2
1.65	94,810	2.4	72.4	1	.44	13,724	.4	73.7	1	.42	286,703	7.5	73.0	3	2.63	26,531	1.5	70.6	1
1.67	32,570	8	73.2	1	.47	173,751	4.4	78.1	1	.42	87,251	2.2	73.9	3	2.67	118,007	3.0	73.6	1
1.72	52,060	1.3	74.5	1	.48	124,698	3.2	78.5	1	.44	106,172	2.7	79.9	2	2.74	81,976	2.0	75.6	2
1.73	92,577	2.3	76.8	1	.49	280,739	5.8	84.3	1	.47	189,461	4.8	84.7	2	2.75	30,939	.8	76.4	2
1.75	111,936	3	77.1	1	.51	66,558	1.8	86.1	1	.49	52,214	1.3	86.0	2	2.77	87,055	1.6	78.6	1
1.76	87,055	2.2	79.3	1	.61	87,055	2.2	86.1	1	.51	40,922	2.3	88.0	1	2.83	94,783	2.2	80.2	1
1.80	40,331	1.6	81.9	1	.62	20,073	.5	88.8	1	.53	89,496	2.3	89.6	1	2.84	90,632	2.3	82.5	1
1.85	61,733	1.0	84.8	1	.64	39,690	1.0	90.7	1	.54	12,168	.3	90.3	2	2.92	30,627	1.0	83.5	1
1.87	12,691	.3	85.1	1	.70	26,152	.9	90.8	1	.57	87,747	2.3	92.1	2	3.07	131,043	3.3	86.8	2

1.99	69,536	1.8	86.9	1	76	77,572	2.0	92.7	1	.62	6,775	.2	92.3	1	2.99	41,371	1.0	87.8	1
2.00	39,001	1.0	87.9	1	.78	15,566	.4	83.1	1	.69	36,152	.9	93.2	1	3.01	69,536	1.8	86.6	1
2.01	13,893	.5	88.4	1	.85	92,534	2.3	93.4	1	.70	43,653	1.1	94.3	2	3.08	92,534	2.3	91.9	1
2.10	77,572	2.0	90.4	1	.87	52,214	1.3	96.7	1	.72	39,001	1.0	96.3	1	3.20	20,078	.5	92.4	1
2.14	29,016	.7	91.1	1	.90	106,172	2.7	99.4	1	.83	132,702	3.4	98.7	2	3.23	39,001	1.0	93.4	1
2.17	6,775	.2	91.3	1	.94	24,870	.6	100.0	1	.91	52,960	1.3	100.0	1	3.24	89,496	2.3	95.7	1
2.20	30,939	.8	92.1	1											3.25	29,139	.7	96.4	1
2.27	17,102	.4	92.5	1											3.35	17,102	.4	96.8	1
2.33	38,418	1.0	93.5	1											3.44	12,168	.3	97.1	1
2.35	29,852	.8	94.3	1											3.68	77,572	2.0	99.1	1
2.37	36,152	.9	95.2	1											3.76	36,152	.9	100.0	1
2.39	41,371	1.0	96.2	1															
2.41	20,078	.5	96.7	1															
2.50	89,496	2.3	99.0	1															
2.53	12,168	.3	99.3	1															
2.63	29,139	.7	100.0	1															
1.04	3,957,588	100.0	100.0	54	.39	3,957,588	100.0	100.0	54	.36	3,957,588	100.0	100.0	54	2.39	3,957,588	100.0	100.0	54

TABLE 58.—"Claimed" labor, supplies, general expenses, and total f. o. b. mine cost for the year 1918, for 15 operators producing bituminous coal in District No. 7 of the State of Ohio.

Labor cost.					Supply cost.					General expenses.					Total f. o. b. mine cost.				
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
\$1.40	29,306	3.5	3.5	1	\$0.07	11,403	1.4	1.4	1	\$0.26	35,762	4.3	4.3	1	\$2.22	227,010	27.5	27.5	1
1.58	277,010	27.5	31.0	1	.10	141,243	17.1	18.5	1	.32	11,403	1.4	5.7	1	2.36	11,403	1.4	28.9	1
1.60	28,756	3.5	34.5	1	.22	62,041	7.5	26.0	1	.35	32,657	3.9	9.6	1	2.39	29,306	3.5	32.4	1
1.75	42,677	5.2	39.7	1	.23	19,148	2.3	28.3	1	.40	227,010	27.5	37.1	1	2.44	35,762	4.3	36.7	1
1.81	180,672	21.9	61.6	1	.24	277,010	27.5	55.8	1	.47	18,481	2.2	39.3	1	2.59	28,756	3.5	40.2	1
1.83	28,273	3.4	65.0	1	.30	35,762	4.3	60.1	1	.52	85,856	10.4	49.7	1	2.75	141,243	17.1	57.3	1
1.88	35,762	4.3	70.7	1	.33	28,756	3.5	63.6	1	.60	42,677	5.2	58.4	1	2.80	42,677	5.2	62.5	1
1.97	11,403	1.4	72.9	1	.35	43,172	5.2	68.8	1	.61	29,306	3.5	61.9	1	2.86	18,481	2.2	64.7	1
2.04	18,481	2.2	75.9	1	.38	29,306	3.5	72.3	1	.66	28,756	3.5	65.3	1	2.89	32,657	3.9	68.6	1
2.13	32,657	3.9	79.8	1	.39	32,657	3.9	76.2	1	.67	28,273	3.4	68.3	1	2.98	28,273	3.4	72.0	1
2.15	85,856	10.4	90.2	1	.41	85,856	10.4	86.6	1	.73	24,691	3.0	70.6	1	3.10	85,856	10.4	82.4	2
2.17	19,148	2.3	92.5	1	.42	39,429	4.8	91.4	1	.77	19,148	2.3	78.1	1	3.21	43,839	6.3	87.7	2
2.21	19,148	2.3	92.5	1	.45	42,677	5.2	96.6	1	.81	62,041	7.5	85.2	1	3.53	39,429	4.8	92.5	1
3.25	62,041	7.5	100.0	1	.49	28,273	3.4	100.0	1	.84	141,243	17.1	95.2	1	4.28	62,041	7.5	100.0	1
										1.30	39,429	4.8	100.0	1					
1.91	826,733	100.0	100.0	15	.28	826,733	100.0	100.0	15	.61	826,733	100.0	100.0	15	2.80	826,733	100.0	100.0	15

TABLE 59.—"Claimed" labor, supplies, general expenses, and total f. o. b. mine cost for the year 1918, for 67 operators producing bituminous coal in District No. 8 of the State of Ohio.

Labor cost.				Supply cost.				General expenses.				Total f. o. b. mine cost.			
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Percent of total.	Accumulated per cent.	Number of operators by \$0.01	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Percent of total.	Accumulated per cent.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Percent of total.	Accumulated per cent.
\$0.48	227,087	1.2	1.2	1	\$0.04	0.1	0.1	\$0.06	16,232	0.1	0.1	\$1.08	254,458	1.3	1.3
.49	121,360	.6	1.8	1	.12	7.0	7.1	.13	93,235	.5	.6	1.36	121,360	.6	1.9
.50	254,458	1.3	3.1	1	.14	3.0	7.1	.15	22,566	.1	.7	1.51	1,389,355	7.2	9.1
.55	841,677	4.4	7.5	1	.17	603.881	10.2	.16	161,098	.8	1.5	1.52	143,837	.8	9.9
.60	89,514	.5	8.0	2	.18	283,253	11.6	.19	1,389,355	7.2	8.7	1.56	138,224	.7	10.6
.64	69,447	.3	8.3	1	.19	1,431,508	19.0	.21	533,583	2.8	11.5	1.62	63,235	.5	11.1
.67	75,583	.4	8.7	1	.20	45,856	19.2	.22	80,230	.4	11.9	1.63	227,087	1.2	12.3
.85	231,447	1.2	9.9	1	.21	430,288	21.4	.24	788,746	4.1	16.0	1.65	23,464	.1	12.4
1.08	34,899	.2	10.1	1	.22	283,218	22.8	.26	851,222	4.4	20.4	1.66	573,521	3.0	15.4
1.12	319,667	1.7	11.8	2	.23	494,564	25.4	.28	1,332,750	7.0	27.8	1.70	851,222	4.4	16.4
1.13	1,389,355	7.2	19.0	1	.24	285,090	25.4	.30	79,764	.4	27.8	1.71	1,736,852	9.0	28.8
1.15	268,509	1.4	20.4	1	.25	700,334	3.6	.31	2,585,855	13.6	41.4	1.73	1,194,810	6.2	36.4
1.16	1,273,855	6.6	27.0	2	.26	2,417,475	12.5	.32	1,279,448	6.7	48.0	1.76	1,175,890	6.2	38.4
1.17	284,602	6.7	33.7	1	.27	1,330,047	6.9	.33	180,100	.9	49.0	1.79	1,028,715	5.8	42.6
1.18	851,222	4.4	36.1	1	.28	243,844	57.5	.34	876,158	4.5	53.5	1.82	603,881	3.1	45.7
1.19	283,218	1.4	38.5	1	.29	231,457	57.5	.35	240,791	1.2	54.7	1.84	34,899	.2	47.0
1.20	120,472	.7	40.1	1	.30	278,201	58.9	.36	379,132	2.0	56.7	1.85	215,225	1.1	47.0
1.21	141,903	.6	40.8	1	.31	71,996	59.3	.37	265,931	6.6	63.3	1.88	931,781	4.8	51.8
1.22	2,028,764	10.5	51.3	3	.32	90,389	60.8	.38	255,506	1.3	64.6	1.89	350,727	1.8	53.6
1.23	1,768,592	9.2	60.5	4	.33	476,794	63.3	.43	556,511	2.9	67.5	1.93	155,798	.6	55.0
1.24	383,902	7.2	67.7	2	.34	180,100	64.2	.44	244,947	1.2	68.7	1.94	120,472	.6	56.4
1.25	68,442	.4	68.1	1	.35	1,553,014	72.3	.45	34,899	3.6	72.5	1.96	135,034	.7	55.7
1.28	337,086	7.0	75.1	1	.36	297,746	74.2	.46	700,334	6.7	79.2	1.98	45,855	.2	55.9
1.29	702,678	3.7	78.8	2	.37	62,304	74.2	.47	294,602	6.7	82.0	2.00	1,220,348	6.4	62.3
1.30	735,362	3.8	82.6	4	.38	267,434	75.6	.48	159,193	2.8	83.6	2.03	355,596	12.7	74.3
1.31	697,116	1.3	86.2	2	.39	570,432	78.6	.50	307,453	1.6	84.2	2.06	141,905	.8	75.3
1.32	267,284	.8	87.5	3	.41	969,234	83.7	.52	119,531	.6	86.3	2.08	147,940	.8	76.1
1.36	263,464	1.3	88.8	3	.43	610,752	86.9	.57	414,490	2.1	87.1	2.09	1,040,669	5.4	81.9
1.42	147,940	.8	89.9	1	.44	1,451,796	94.5	.60	156,641	.2	87.3	2.10	75,583	.4	81.9
1.44	46,962	.3	90.2	2	.45	443,027	96.9	.61	42,153	.3	87.3	2.14	334,130	1.7	83.6
1.45	56,410	.3	90.2	1	.46	22,566	97.0	.64	59,447	.3	87.6				



TABLE 59.—“Claimed” labor, supplies, general expenses, and total f. o. b. mine cost for the year 1918, for 67 operators producing bituminous coal in District No. 8 of the State of Ohio—Continued.

Labor cost.					Supply cost.					General expense.					Total f. o. b. mine cost.				
Per ton cost by \$0.01 groupings.	Production (net tons).	Percent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Percent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Percent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Percent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
\$1.46	297,746	1.6	91.8	1	\$0.50	86,410	.3	97.3	1	98.8	71,998	.4	83.0	1	2.17	49,893	1.2	81.6	9
1.47	36,067	1.2	92.0	1	.54	75,583	.4	97.7	1	.70	76,683	.4	83.4	1	2.18	131,523	1.7	82.8	1
1.48	230,943	1.2	93.2	1	.55	253,464	1.3	99.0	1	.72	31,794	.2	83.6	1	2.20	241,594	1.2	83.9	1
1.51	494,370	2.6	93.8	2	.59	86,514	.5	99.5	1	.76	13,631	.1	83.7	1	2.22	89,514	.5	83.3	1
1.52	42,153	.2	94.0	1	.63	20,759	.1	99.6	1	.80	268,509	1.4	90.1	1	2.29	100,401	.6	83.9	1
1.54	108,685	.6	94.6	1	.85	36,066	.2	99.8	1	.82	62,304	.3	90.4	1	2.30	297,746	1.4	88.3	1
1.55	13,681	.1	94.7	1	1.04	41,333	.2	100.0	1	.86	316,143	1.7	92.1	2	2.31	297,746	1.4	88.3	1
1.58	108,417	.5	97.2	1						.94	571,053	3.0	95.1	1	2.39	414,608	2.2	92.3	1
1.59	88,046	.3	97.9	1						1.14	86,514	.5	95.6	1	2.42	219,797	1.1	93.4	1
1.73	31,794	.9	98.8	1						1.30	6,100	.0	100.0	1	2.47	86,410	.5	93.7	1
1.83	62,304	.3	99.1	1											2.48	263,464	1.3	95.0	1
1.88	22,985	.1	99.2	1											2.49	22,985	.1	95.1	1
2.16	36,421	.2	99.4	1											2.53	13,631	.1	95.3	1
2.23	36,666	.2	99.6	1											2.56	571,053	3.0	98.3	1
2.35	41,333	.2	99.8	1											2.61	31,794	.2	98.4	1
2.36	16,253	.1	99.9	1											2.69	88,046	.5	98.9	1
2.42	20,759	.1	100.0	1											2.73	16,253	.1	99.0	1
															2.76	6,100	.0	99.0	1
															2.92	28,421	.2	99.2	1
															3.02	62,304	.3	99.5	1
															3.47	20,759	.1	99.6	1
															3.73	41,333	.2	99.8	1
															3.80	36,666	.2	100.0	1
1.20	19,309,978	100.0	100.0	67	.30	19,309,978	100.0	100.0	67	.41	19,309,978	100.0	100.0	67	1.91	19,309,978	100.0	100.0	67

## COAL.

TABLE 60.—“Claimed” labor, supplies, general expenses, and total f. o. b. mine cost for the year 1918, for 11 operators producing bituminous coal in District No. 9 of the State of Ohio.

Labor cost.					Supply cost.					General expenses.					Total f. o. b. mine cost				
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
\$1.05	93,717	1.8	1.8	1	\$0.13	35,406	0.7	0.7	1	\$0.12	709,130	13.5	13.5	1	\$1.05	2,746,778	62.1	62.1	1
1.19	20,373	2.2	2.2	1	.19	2,746,778	52.1	52.8	1	.17	215,931	4.1	17.0	1	1.08	709,130	13.5	65.6	1
1.26	2,746,778	52.1	54.3	1	.22	797,057	15.1	67.9	1	.19	2,746,778	52.1	69.7	1	1.76	20,373	4.1	68.0	1
1.27	709,130	13.5	67.8	1	.23	470,802	8.9	76.8	1	.24	568,445	10.7	80.4	2	1.94	215,931	4.1	70.1	1
1.35	36,038	1.7	68.5	1	.26	118,016	2.2	78.0	1	.31	20,373	4.4	80.8	1	1.99	470,802	8.9	79.0	1
1.36	215,931	4.1	72.6	1	.27	82,339	1.6	80.6	1	.34	797,057	15.1	95.9	1	1.97	36,038	1.7	79.7	1
1.42	470,802	8.9	81.5	1	.29	709,130	13.5	94.1	1	.35	36,038	1.6	97.5	1	2.00	97,643	1.8	81.5	1
1.47	797,057	15.1	96.6	1	.31	215,931	4.1	98.2	1	.66	46,291	.9	98.3	1	2.03	797,057	15.1	96.6	1
1.50	97,643	1.8	98.4	1	.47	93,717	1.8	100.0	1	.85	35,406	1.7	98.2	1	2.33	93,717	1.8	98.4	1
1.61	35,406	.9	99.1	1	.....	.....	.....	.....	.....	.86	93,717	1.8	100.0	.....	2.39	35,406	1.7	99.1	1
2.16	46,291	.....	100.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.09	46,291	.9	100.0	.....
1.32	5,269,166	100.0	100.0	11	.24	5,269,166	100.0	100.0	11	.23	5,269,166	100.0	100.0	11	1.79	5,269,166	100.0	100.0	11

TABLE 61.—Total "Revised" labor cost, by quarterly and yearly periods for 1918, for 92 operators producing bituminous coal in District No. 1 of the State of Indiana.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.															
0.75	3,195	0.1	0.1	1	0.86	20,980	0.3	0.3	1	0.89	3,589	0.1	0.1	1	0.93	15,715	0.3	0.3	1	0.90	12,500	0.1	0.1	1	0.90	12,500	0.1	0.1	1	0.90	12,500	0.1	0.1	1															
1.07	245,383	4.0	4.1	1	.95	2,896	.0	.3	1	.80	21,082	.3	.3	1	1.05	2,850	.1	.4	1	1.07	72,690	.3	.4	1	1.07	72,690	.3	.4	1	1.07	72,690	.3	.4	1															
1.10	44,462	1.8	4.9	1	1.07	41,211	.8	1.0	1	1.06	84,931	1.2	1.6	1	1.07	113,077	1.9	2.3	1	1.07	322,198	1.3	1.7	1	1.08	322,198	1.3	1.7	1	1.08	322,198	1.3	1.7	1															
1.13	107,921	2.5	9.2	1	1.09	62,809	1.0	2.8	1	1.07	99,584	1.4	3.0	1	1.12	44,424	2.7	3.0	1	1.10	999,473	4.0	6.7	1	1.10	999,473	4.0	6.7	1	1.10	999,473	4.0	6.7	1															
1.14	145,151	5.1	9.3	1	1.10	63,809	1.1	3.9	1	1.08	283,434	4.1	7.1	1	1.13	261,071	4.3	7.3	1	1.13	277,504	4.1	7.3	1	1.13	277,504	4.1	7.3	1	1.13	277,504	4.1	7.3	1															
1.16	421,151	7.2	16.5	1	1.12	218,985	3.5	7.4	1	1.14	147,733	2.1	10.3	1	1.16	70,502	1.2	8.5	1	1.15	133,900	7.7	7.5	1	1.15	133,900	7.7	7.5	1	1.15	133,900	7.7	7.5	1															
1.18	32,202	.5	17.0	1	1.13	135,805	2.2	9.6	1	1.14	147,733	2.1	10.3	1	1.22	53,045	.9	9.4	1	1.16	556,038	2.2	9.4	1	1.16	556,038	2.2	9.4	1	1.16	556,038	2.2	9.4	1															
1.19	76,675	1.3	18.3	1	1.15	370,565	9.5	15.5	1	1.18	361,138	5.9	16.4	1	1.25	373,069	6.1	15.5	1	1.19	1,167,078	4.6	14.3	1	1.19	1,167,078	4.6	14.3	1	1.19	1,167,078	4.6	14.3	1															
1.20	197,553	3.4	21.7	1	1.17	30,453	.5	16.5	1	1.19	32,588	.9	16.4	1	1.26	234,312	3.9	19.4	1	1.20	262,296	1.0	15.3	1	1.20	262,296	1.0	15.3	1	1.20	262,296	1.0	15.3	1															
1.22	118,688	2.0	23.7	1	1.19	31,460	.8	17.3	1	1.21	91,852	3.8	22.0	1	1.27	245,797	4.0	24.9	1	1.24	659,494	2.6	20.8	1	1.24	659,494	2.6	20.8	1	1.24	659,494	2.6	20.8	1															
1.25	52,265	.9	24.6	1	1.22	48,450	.5	18.5	1	1.24	26,770	1.3	22.0	1	1.28	127,327	2.0	26.9	1	1.26	239,098	1.0	20.8	1	1.26	239,098	1.0	20.8	1	1.26	239,098	1.0	20.8	1															
1.26	76,760	1.4	26.0	1	1.25	155,708	2.3	19.6	1	1.25	145,706	2.1	24.4	1	1.34	390,878	6.0	34.7	1	1.28	542,075	2.2	23.0	1	1.28	542,075	2.2	23.0	1	1.28	542,075	2.2	23.0	1															
1.31	49,733	.8	28.8	1	1.27	136,216	2.2	23.9	1	1.26	192,766	2.7	27.1	1	1.35	360,878	6.8	38.7	1	1.31	694,855	2.8	25.8	1	1.31	694,855	2.8	25.8	1	1.31	694,855	2.8	25.8	1															
1.33	231,097	3.9	32.7	1	1.29	343,352	5.6	26.5	1	1.27	68,301	1.0	28.1	1	1.37	117,224	1.9	38.6	1	1.32	757,267	3.0	29.7	1	1.32	757,267	3.0	29.7	1	1.32	757,267	3.0	29.7	1															
1.34	95,256	1.6	34.3	1	1.31	382,943	6.3	30.1	1	1.29	359,492	5.2	33.3	1	1.38	105,453	1.7	40.3	1	1.34	282,968	1.1	36.3	1	1.34	282,968	1.1	36.3	1	1.34	282,968	1.1	36.3	1															
1.36	200,115	3.6	37.9	1	1.32	402,730	6.5	36.6	1	1.30	104,967	1.5	34.8	1	1.40	100,453	1.7	40.3	1	1.35	433,150	1.6	37.9	1	1.35	433,150	1.6	37.9	1	1.35	433,150	1.6	37.9	1															
1.37	18,353	.3	38.2	1	1.33	117,172	1.9	38.5	1	1.32	66,241	1.0	35.8	1	1.42	50,090	.8	41.8	1	1.37	913,969	3.7	41.6	1	1.37	913,969	3.7	41.6	1	1.37	913,969	3.7	41.6	1															
1.38	621,637	10.6	48.8	1	1.34	702,172	11.2	49.7	1	1.33	91,920	1.3	37.1	1	1.44	43,138	.7	41.8	1	1.39	213,191	1.8	43.4	1	1.39	213,191	1.8	43.4	1	1.39	213,191	1.8	43.4	1															
1.40	392,396	6.4	55.2	1	1.35	2,632	.0	49.7	1	1.35	221,013	3.2	40.3	1	1.45	39,301	.6	42.4	1	1.40	449,636	8.5	51.9	1	1.40	449,636	8.5	51.9	1	1.40	449,636	8.5	51.9	1															
1.41	29,344	.6	55.7	1	1.36	77,327	1.3	51.0	1	1.36	159,687	3.4	48.5	1	1.47	20,057	1.4	51.9	1	1.41	510,923	2.1	54.0	1	1.41	510,923	2.1	54.0	1	1.41	510,923	2.1	54.0	1															
1.42	49,717	.8	57.1	1	1.38	45,888	.7	53.1	1	1.38	93,192	1.7	48.5	1	1.49	82,342	1.4	53.3	1	1.41	148,534	.8	54.0	1	1.41	148,534	.8	54.0	1	1.41	148,534	.8	54.0	1															
1.43	129,502	2.0	60.0	1	1.39	3,182	.0	53.1	1	1.41	471,268	6.7	56.5	1	1.50	39,027	.6	57.4	1	1.42	202,545	.8	55.4	1	1.42	202,545	.8	55.4	1	1.42	202,545	.8	55.4	1															
1.44	120,335	2.1	62.0	1	1.40	208,745	3.4	56.5	1	1.42	302,401	4.3	60.8	1	1.51	115,740	2.6	61.0	1	1.43	876,982	3.8	58.9	1	1.43	876,982	3.8	58.9	1	1.43	876,982	3.8	58.9	1															
1.45	62,511	.9	63.0	1	1.41	83,126	1.4	58.4	1	1.43	281,554	4.0	64.9	1	1.52	115,740	2.6	61.0	1	1.44	144,845	1.0	60.5	1	1.44	144,845	1.0	60.5	1	1.44	144,845	1.0	60.5	1															
1.46	96,384	1.1	64.1	1	1.42	87,409	1.5	64.1	1	1.44	281,554	4.0	64.9	1	1.53	115,740	2.6	61.0	1	1.45	265,498	1.0	61.2	1	1.45	265,498	1.0	61.2	1	1.45	265,498	1.0	61.2	1															
1.47	62,511	.9	65.0	1	1.43	874,501	13.9	72.3	1	1.45	2,147	.0	64.9	1	1.54	115,740	2.6	61.0	1	1.46	188,534	8.5	51.9	1	1.46	188,534	8.5	51.9	1	1.46	188,534	8.5	51.9	1															
1.48	764,064	13.1	77.2	1	1.44	874,501	13.9	72.3	1	1.46	192,321	2.8	68.0	1	1.55	235,328	3.9	67.1	1	1.47	472,948	1.3	60.8	1	1.47	472,948	1.3	60.8	1	1.47	472,948	1.3	60.8	1															
1.49	62,511	.9	78.0	1	1.45	20,349	.3	74.8	1	1.47	192,321	2.8	68.0	1	1.56	235,328	3.9	67.1	1	1.48	188,534	8.5	51.9	1	1.48	188,534	8.5	51.9	1	1.48	188,534	8.5	51.9	1															
1.50	188,534	8.5	81.4	1	1.46	128,224	2.0	74.8	1	1.48	86,784	1.2	68.0	1	1.57	683,192	11.5	78.6	1	1.49	472,948	1.3	60.8	1	1.49	472,948	1.3	60.8	1	1.49	472,948	1.3	60.8	1															
1.56	8,376	.1	81.6	1	1.40	128,224	2.0	74.8	1	1.51	86,784	1.2	68.0	1	1.58	683,192	11.5	78.6	1	1.51	65,463	.3	81.1	1	1.51	65,463	.3	81.1	1	1.51	65,463	.3	81.1	1															

1.57	86,754	1.7	83.2	2	1.47	211,981	3.4	78.2	1	1.52	54,865	8	70.0	1	1.62	28,303	5	80.1	1	1.54	118,733	.4	81.5	2
1.58	44,698	.8	84.0	1	1.48	15,712	.9	78.4	1	1.55	923,269	13.1	83.1	3	1.63	243,352	4.1	84.2	3	1.56	8,810	.0	81.5	1
1.60	54,759	.2	84.2	1	1.52	54,759	.9	79.3	1	1.53	104,086	2.3	85.4	3	1.64	91,978	1.5	85.7	2	1.58	600,888	2.4	83.9	4
1.61	33,150	.6	84.8	3	1.53	114,707	1.8	81.1	2	1.58	1,325	.0	85.4	1	1.65	49,327	.8	86.5	1	1.60	69,768	.3	84.2	1
1.63	33,199	1.1	85.9	1	1.55	64,984	.7	81.8	2	1.59	64,724	.9	86.3	2	1.67	41,570	.9	87.2	2	1.61	266,265	1.1	86.3	2
1.64	31,423	.5	86.4	2	1.57	19,224	3.1	82.1	1	1.61	15,635	.2	86.5	2	1.68	55,058	.9	88.1	2	1.63	503,537	2.0	87.3	1
1.65	24,203	.4	86.8	2	1.58	67,394	1.1	82.2	1	1.62	50,428	.7	87.2	2	1.69	14,082	.2	88.3	1	1.65	356,970	1.4	88.7	1
1.66	39,352	.7	87.5	3	1.59	196,557	3.2	86.4	3	1.63	34,973	.5	87.7	1	1.71	83,074	1.3	89.6	2	1.67	54,838	.2	88.9	2
1.67	124,610	2.2	89.7	2	1.60	76,467	1.2	87.6	1	1.64	11,878	.2	87.9	1	1.74	82,262	1.4	91.0	1	1.69	190,226	.8	89.7	1
1.69	60,520	1.1	90.8	1	1.61	144,379	2.3	89.9	2	1.66	53,824	.8	88.7	2	1.75	66,800	1.1	92.1	1	1.70	140,748	.6	90.3	2
1.72	102,528	1.7	92.5	3	1.62	36,021	.6	90.5	1	1.69	156,463	2.2	90.9	2	1.78	23,754	.4	92.5	1	1.71	399,868	1.6	91.9	2
1.73	71,042	1.2	93.7	1	1.63	31,963	.5	91.0	1	1.70	59,401	.8	91.7	2	1.79	23,059	.4	92.9	1	1.74	246,241	1.0	92.9	1
1.75	127,378	2.2	95.9	3	1.64	71,143	1.1	92.1	1	1.71	74,491	1.1	92.8	2	1.81	42,085	.7	93.6	2	1.75	291,762	1.2	94.1	1
1.76	16,561	.3	96.2	1	1.65	15,844	.3	92.4	1	1.73	18,558	.3	93.1	1	1.82	14,324	.2	93.8	1	1.76	48,094	.2	94.3	1
1.77	14,125	.2	96.4	1	1.67	15,283	.2	92.6	2	1.75	25,866	.4	93.5	1	1.85	66,721	1.1	94.9	3	1.78	277,258	1.1	95.4	2
1.82	67,831	1.0	97.5	1	1.72	81,294	1.3	93.9	2	1.77	83,188	1.2	94.7	1	1.87	36,162	.6	95.5	2	1.79	111,925	.4	95.8	1
1.83	23,071	.4	97.9	1	1.73	35,070	.6	94.5	1	1.78	61,567	.9	95.6	1	1.88	12,050	.2	95.7	1	1.80	230,441	.9	96.7	1
1.85	23,873	.4	98.3	1	1.75	32,540	.5	95.0	1	1.79	58,990	.8	96.4	1	1.90	12,679	.2	95.9	1	1.81	97,501	.3	97.1	1
1.88	3,499	.1	98.4	1	1.79	9,392	.1	95.1	1	1.81	28,397	.4	96.8	1	1.91	45,884	.8	96.7	1	1.84	84,501	.5	97.4	1
1.90	16,106	.3	98.7	1	1.80	44,504	.7	95.8	1	1.82	23,271	.3	97.1	1	1.93	27,561	.9	98.1	1	1.86	131,925	.8	98.7	1
2.03	25,069	.4	99.1	1	1.85	5,923	1.2	97.9	2	1.89	21,691	.4	97.8	1	1.96	50,370	.6	98.7	1	1.88	203,899	.3	99.0	1
2.04	9,653	.2	99.3	1	1.88	9,923	.2	98.1	1	1.90	29,471	.2	98.0	1	1.97	37,165	.6	99.2	1	1.90	117,949	.4	99.4	2
2.16	14,469	.4	99.5	1	1.91	7,126	.1	98.2	1	1.94	23,342	.3	98.3	1	2.02	18,419	.3	99.6	1	1.96	45,084	.2	99.6	1
2.24	25,768	.4	99.9	1	2.01	4,050	.1	98.3	1	1.96	46,150	.7	99.0	1	2.12	20,099	.3	99.9	1	2.05	15,205	.1	99.7	1
3.02	3,383	.1	100.0	1	2.03	17,859	.3	98.6	1	1.97	20,664	.3	99.3	1	2.28	1,367	.0	99.9	1	2.09	87,933	.3	100.0	1
					2.04	12,618	.2	98.8	1	2.06	4,366	.1	99.4	1	2.40	3,300	.1	100.0	1					
					2.06	4,346	.1	98.9	1		15,359	.2	99.6	1										
					2.07	18,831	.3	99.2	1		30,586	.4	100.0	1										
					2.13	1,892	.0	99.2	1															
					2.20	19,207	.3	99.5	1															
					2.26	19,393	.3	99.8	1															
					2.40	9,840	.2	100.0	1															
					3.01	1,785	.0	100.0	1															
1.41	5,861,710	100.0	100.0	92	1.39	6,277,148	100.0	100.0	92	1.41	7,000,218	100.0	100.0	92	1.47	6,039,836	100.0	100.0	92	1.42	25,179,012	100.0	100.0	92

TABLE 62.—Total "Revised" supply cost, by quarterly and yearly periods for 1918, for 92 operators producing bituminous coal in District No. 1 of the State of Indiana.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
30.00	82,283	1.3	1.3	2	30.00	84,414	1.2	1.2	2	30.00	80,310	1.2	1.2	2	30.00	15,966	0.3	0.3	2	30.00	322,835	1.3	1.3	1.3	1.3	1.3	322,835	1.3	1.3	1.3	1.3	1.3	322,835	1.3	1.3	1.3	1.3	1.3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
0.02	3,489	1.1	2.5	1	0.01	4,060	1.5	1.7	1	0.01	38,065	0.6	1.2	1	0.01	63,192	1.0	1.8	1	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,206	0.3	0.5	1.5	1.9	0.02	15,2

.46	9,653	.2	97.5	1	.36	17,876	.3	97.8	1	.37	51,162	.7	97.7	2	.46	41,209	.7	96.6	1	.42	84,406	.3	98.3	1
.49	41,688	.8	98.3	1	.38	19,224	.3	98.1	1	.39	15,359	.2	97.9	1	.47	60,912	1.1	97.7	1	.47	183,900	.7	98.0	1
.61	20,681	.4	98.7	1	.39	1,850	.0	98.1	1	.40	42,188	.6	98.5	1	.54	37,272	.6	98.3	1	.53	201,286	.8	98.8	1
.52	22,873	.4	99.1	1	.42	9,840	.2	98.3	1	.43	48,419	.7	99.2	2	.56	42,560	.7	99.0	1	.54	45,684	.2	100.0	1
.56	44,482	.8	99.9	1	.45	17,859	.3	98.6	1	.47	30,434	.4	99.6	1	.59	44,424	.7	99.7	1					
1.34	3,883	.1	100.0	1	.48	4,346	.1	98.7	1	.71	30,586	.4	100.0	1	.61	20,999	.3	100.0	1					
					.52	1,785	.0	98.7	1															
					.61	67,394	1.1	99.8	1															
					.65	12,613	.2	100.0	1															
.20	5,961,710	100.0	100.0	92	.20	6,277,148	100.0	100.0	92	.19	7,000,218	100.0	100.0	92	.21	6,089,886	100.0	100.0	92	.21	25,179,012	100.0	100.0	92

<sup>1</sup> Included in labor cost.



.45	62,875	1.0	97.8	1	.40	67,335	1.1	97.0	1	.69	98,377	1.4	100.0	2	.53	46,249	.7	96.5	3	.50	256,498	1.0	98.2	1
.47	12,172	.2	98.0	1	.41	9,392	1.1	97.1	1	.....	.....	.....	.....	.....	.64	2,850	.1	96.6	1	.74	180,193	.7	98.9	1
.49	22,448	.4	98.4	1	.44	61,915	1.0	98.1	1	.....	.....	.....	.....	.....	.66	63,192	1.0	97.6	1	.78	36,984	.1	100.0	1
.51	57,680	1.0	98.4	1	.45	5,143	1.0	98.1	2	.....	.....	.....	.....	.....	.70	66,912	1.1	98.7	1	.....	.....	.....	.....	.....
.71	11,020	.2	99.6	1	.47	72,190	1.1	99.2	2	.....	.....	.....	.....	.....	.73	12,050	1.2	98.9	1	.....	.....	.....	.....	.....
.73	3,353	.1	98.7	1	.49	16,859	.3	99.5	1	.....	.....	.....	.....	.....	.73	75,385	1.1	100.0	1	.....	.....	.....	.....	.....
.89	9,653	.2	98.9	1	.71	19,207	.3	99.8	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.89	2,660	.1	100.0	1	1.11	9,840	.2	100.0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.85	.....	.....	.....	.....	1.33	1,785	.0	100.0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.22	5,861,710	100.0	100.0	92	.23	6,277,148	100.0	100.0	92	.23	7,000,218	100.0	100.0	92	.26	6,099,636	100.0	100.0	92	.23	25,179,012	100.0	100.0	92





1.90	50,563	9	01.6	1.94	35,478	6	04.1	1	1.90	83,136	1.2	04.4	2	2.09	77,231	1.3	04.5	2	1.93	962,819	3.9	60.9	3	1
1.93	12,474	2	01.8	1.96	128,294	2.0	06.1	1	1.90	142,524	2.1	06.5	1	2.11	40,914	1.7	05.2	1	1.94	288,433	1.2	62.1	1	1
1.96	5,685	1	01.9	1.98	134,470	2.3	08.4	5	1.91	91,829	1.3	08.7	1	2.12	16,910	1.7	05.3	1	1.95	256,404	1.0	63.1	1	1
1.98	59,407	1	02.9	1.99	330,801	5.3	08.7	2	1.93	131,564	1.3	08.8	1	2.13	101,596	1.7	07.2	1	1.96	599,060	2.0	65.1	1	1
1.99	63,199	1	04.1	1.91	44,984	7	04.4	1	1.94	15,894	2	06.9	1	2.14	1,825	0	08.0	1	1.98	222,494	9	66.0	1	1
2.00	764,043	13.1	77.1	1.95	35,505	6	06.5	1	1.97	59,214	8	70.7	1	2.15	46,236	8	08.2	1	1.99	171,045	7	66.7	1	1
2.01	196,560	3.4	80.5	1.96	103,712	1.5	06.5	1	2.01	199,819	2.8	73.5	1	2.16	26,393	4	08.5	1	2.00	193,860	8	67.5	1	1
2.02	89,467	3	81.1	1.97	103,636	1.6	06.1	2	2.05	14,631	1.2	74.9	1	2.17	23,059	4	08.9	1	2.01	69,768	3	67.8	1	1
2.03	39,453	5	81.6	1.98	925,594	14.7	82.8	2	2.07	13,787	6	75.5	1	2.18	151,737	3.0	72.1	2	2.02	215,262	7	69.3	1	1
2.04	39,353	7	82.3	1.99	118,623	1.9	84.7	3	2.05	43,968	6	75.5	1	2.19	681,231	11.4	83.5	2	2.03	585,865	2.3	71.6	1	1
2.05	105,002	1.0	84.2	2.00	15,948	3	85.0	1	2.08	26,866	4	76.8	1	2.20	33,754	1.9	83.8	1	2.07	3,043,454	12.1	82.7	1	1
2.06	124,648	2	84.6	2.01	71,143	1.1	86.1	1	2.06	64,453	0	76.8	1	2.21	183,700	1.7	84.3	1	2.10	144,845	6	84.3	1	1
2.07	124,648	2	84.6	2.02	172,680	1.8	87.9	1	2.11	122,966	10.9	87.7	1	2.22	44,434	1.7	84.5	1	2.11	183,700	3.0	88.0	1	1
2.08	73,871	1.3	88.1	2.03	172,680	2.8	90.7	2	2.14	122,966	1.8	90.7	1	2.23	62,262	1.4	87.9	1	2.12	782,740	7	88.0	1	1
2.09	14,583	3	88.4	2.04	14,433	2	90.9	1	2.15	122,966	2.2	91.7	1	2.24	102,772	1.6	89.5	1	2.13	782,740	7	88.0	1	1
2.10	57,931	1.0	89.1	2.05	81,294	1.2	92.2	1	2.16	83,188	1.2	92.9	1	2.25	102,772	1.6	89.5	1	2.14	782,740	7	88.0	1	1
2.11	100,322	1.7	91.1	2.06	54,084	9	93.1	1	2.17	83,188	1.2	93.3	1	2.26	102,772	1.6	89.5	1	2.15	782,740	7	88.0	1	1
2.12	10,541	3	91.4	2.07	2,267	0	93.7	1	2.18	26,397	4	93.3	1	2.27	102,772	1.6	89.5	1	2.16	471,552	8	90.3	1	1
2.13	14,125	3	91.6	2.08	85,079	0	93.7	1	2.19	42,188	9	93.8	1	2.28	102,772	1.6	89.5	1	2.17	471,552	8	90.3	1	1
2.14	71,042	1.2	92.3	2.09	1,992	0	94.1	1	2.20	42,188	9	93.8	1	2.29	102,772	1.6	89.5	1	2.18	471,552	8	90.3	1	1
2.15	27,743	4	93.2	2.10	28,490	4	94.7	1	2.21	61,577	9	94.8	1	2.30	102,772	1.6	89.5	1	2.19	146,401	9	91.1	1	1
2.16	47,783	8	94.0	2.11	35,073	5	94.5	1	2.22	61,577	9	94.8	1	2.31	102,772	1.6	89.5	1	2.20	295,261	1.2	92.3	1	1
2.17	60,480	1.0	95.0	2.12	35,073	5	94.5	1	2.23	61,577	9	94.8	1	2.32	102,772	1.6	89.5	1	2.21	295,261	1.2	92.3	1	1
2.18	26,071	4	96.4	2.13	54,264	9	95.6	1	2.24	61,577	9	94.8	1	2.33	102,772	1.6	89.5	1	2.22	295,261	1.2	92.3	1	1
2.19	46,187	3	97.6	2.14	54,264	9	95.6	1	2.25	61,577	9	94.8	1	2.34	102,772	1.6	89.5	1	2.23	295,261	1.2	92.3	1	1
2.20	26,071	4	98.4	2.15	54,264	9	95.6	1	2.26	61,577	9	94.8	1	2.35	102,772	1.6	89.5	1	2.24	295,261	1.2	92.3	1	1
2.21	46,187	3	97.6	2.16	54,264	9	95.6	1	2.27	61,577	9	94.8	1	2.36	102,772	1.6	89.5	1	2.25	295,261	1.2	92.3	1	1
2.22	46,187	3	97.6	2.17	54,264	9	95.6	1	2.28	61,577	9	94.8	1	2.37	102,772	1.6	89.5	1	2.26	295,261	1.2	92.3	1	1
2.23	46,187	3	97.6	2.18	54,264	9	95.6	1	2.29	61,577	9	94.8	1	2.38	102,772	1.6	89.5	1	2.27	295,261	1.2	92.3	1	1
2.24	46,187	3	97.6	2.19	54,264	9	95.6	1	2.30	61,577	9	94.8	1	2.39	102,772	1.6	89.5	1	2.28	295,261	1.2	92.3	1	1
2.25	46,187	3	97.6	2.20	54,264	9	95.6	1	2.31	61,577	9	94.8	1	2.40	102,772	1.6	89.5	1	2.29	295,261	1.2	92.3	1	1
2.26	46,187	3	97.6	2.21	54,264	9	95.6	1	2.32	61,577	9	94.8	1	2.41	102,772	1.6	89.5	1	2.30	295,261	1.2	92.3	1	1
2.27	46,187	3	97.6	2.22	54,264	9	95.6	1	2.33	61,577	9	94.8	1	2.42	102,772	1.6	89.5	1	2.31	295,261	1.2	92.3	1	1
2.28	46,187	3	97.6	2.23	54,264	9	95.6	1	2.34	61,577	9	94.8	1	2.43	102,772	1.6	89.5	1	2.32	295,261	1.2	92.3	1	1
2.29	46,187	3	97.6	2.24	54,264	9	95.6	1	2.35	61,577	9	94.8	1	2.44	102,772	1.6	89.5	1	2.33	295,261	1.2	92.3	1	1
2.30	46,187	3	97.6	2.25	54,264	9	95.6	1	2.36	61,577	9	94.8	1	2.45	102,772	1.6	89.5	1	2.34	295,261	1.2	92.3	1	1
2.31	46,187	3	97.6	2.26	54,264	9	95.6	1	2.37	61,577	9	94.8	1	2.46	102,772	1.6	89.5	1	2.35	295,261	1.2	92.3	1	1
2.32	46,187	3	97.6	2.27	54,264	9	95.6	1	2.38	61,577	9	94.8	1	2.47	102,772	1.6	89.5	1	2.36	295,261	1.2	92.3	1	1
2.33	46,187	3	97.6	2.28	54,264	9	95.6	1	2.39	61,577	9	94.8	1	2.48	102,772	1.6	89.5	1	2.37	295,261	1.2	92.3	1	1
2.34	46,187	3	97.6	2.29	54,264	9	95.6	1	2.40	61,577	9	94.8	1	2.49	102,772	1.6	89.5	1	2.38	295,261	1.2	92.3	1	1
2.35	46,187	3	97.6	2.30	54,264	9	95.6	1	2.41	61,577	9	94.8	1	2.50	102,772	1.6	89.5	1	2.39	295,261	1.2	92.3	1	1
2.36	46,187	3	97.6	2.31	54,264	9	95.6	1	2.42	61,577	9	94.8	1	2.51	102,772	1.6	89.5	1	2.40	295,261	1.2	92.3	1	1
2.37	46,187	3	97.6	2.32	54,264	9	95.6	1	2.43	61,577	9	94.8	1	2.52	102,772	1.6	89.5	1	2.41	295,261	1.2	92.3	1	1
2.38	46,187	3	97.6	2.33	54,264	9	95.6	1	2.44	61,577	9	94.8	1	2.53	102,772	1.6	89.5	1	2.42	295,261	1.2	92.3	1	1
2.39	46,187	3	97.6	2.34	54,264	9	95.6	1	2.45	61,577	9	94.8	1	2.54	102,772	1.6	89.5	1	2.43	295,261	1.2	92.3	1	1
2.40	46,187	3	97.6	2.35	54,264	9	95.6	1	2.46	61,577	9	94.8	1	2.55	102,772	1.6	89.5	1	2.44	295,261	1.2	92.3	1	1
2.41	46,187	3	97.6	2.36	54,264	9	95.6	1	2.47	61,577	9	94.8	1	2.56	102,772	1.6	89.5	1	2.45	295,261	1.2	92.3	1	1
2.42	46,187	3	97.6	2.37	54,264	9	95.6	1	2.48	61,577	9	94.8	1	2.57	102,772	1.6	89.5	1	2.46	295,261	1.2	92.3	1	1
2.43	46,187	3	97.6	2.38	54,264	9	95.6	1	2.49	61,577	9	94.8	1	2.58	102,772	1.6	89.5	1	2.47	295,261	1.2	92.3	1	1
2.44	46,187	3	97.6	2.39	54,264	9	95.6	1	2.50	61,577	9	94.8	1	2.59	102,772	1.6	89.5	1	2.48	295,261	1.2	92.3	1	1
2.45	46,187	3	97.6	2.40	54,264	9	95.6	1	2.51	61,577	9	94.8	1	2.60	102,772	1.6	89.5	1	2.49	295,261	1.2	92.3	1	1
2.46	46,187	3	97.6	2.41	54,264	9	95.6	1	2.52	61,577	9	94.8	1	2.61	102,772	1.6	89.5	1	2.50	295,261	1.2	92.3	1	1
2.47	46,187	3	97.6	2.42	54,264	9	95.6	1	2.53	61,577	9	94.8	1	2.62	102,772	1.6	89.5	1	2.51	295,261	1.2	92.3	1	1
2.48	46,187	3	97.6	2.43	54,264	9	95.6	1	2.54	61,577	9	94.8	1	2.63	102,772	1.6	89.5	1	2.52	295,261	1.2	92.3	1	1
2.49	46,187	3	97.6	2.44	54,264	9	95.6	1	2.55	61,577	9	94.8	1	2.64	102,772	1.6	89.5	1	2.53	295,261	1.2	92.3	1	1
2.50	46,187	3	97.6	2.45	54,264	9	95.6	1	2.56	61,577	9	94.8	1	2.65	102,772	1.6	89.5	1	2.54	295,261	1.2	92.3	1	1
2.51	46,187	3	97.6	2.46	54,264	9	95.6	1	2.57	61,577	9													

TABLE 65.—Total sales realization, by quarterly and yearly periods for 1918, for 92 operators producing bituminous coal in District No. 1 of the State of Indiana.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.																																																																																																																																																																																																																																																																																																																																																																																																																																										
Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net tons.)

2.47	63,648	1.0	74.3	2	2.43	266,245	4.3	84.8	2	2.44	125,182	1.9	94.7	2	2.36	289,539	4.8	80.9	5	2.48	141,099	6	91.4	1
2.48	95,940	1.7	76.0	3	2.44	173,240	2.8	87.6	1	2.46	138,400	2.0	96.7	1	2.37	483,445	8.0	88.9	5	2.49	508,573	2.0	93.4	1
2.49	270,451	4.5	80.5	3	2.45	152,600	2.2	88.8	4	2.63	27,369	4.4	97.1	1	2.39	297,548	4.9	89.8	2	2.50	97,202	4.4	93.8	1
2.50	186,052	1.5	82.0	4	2.47	103,643	1.7	91.2	1	2.67	21,715	3	97.4	1	2.52	1,167,223	4.6	98.4	1	2.52	1,167,223	4.6	98.4	1
2.51	130,941	2.2	84.2	3	2.48	41,268	1.7	92.3	2	2.75	42,752	6	98.0	1	2.44	113,077	1.9	93.8	1	2.59	90,493	4	98.8	1
2.54	120,399	2.1	86.3	3	2.49	39,091	4	92.8	1	2.87	14,610	2	98.2	1	2.45	137,354	2.3	98.1	1	2.60	174,279	7	99.5	1
2.55	62,728	1.8	87.1	1	2.51	112,450	1.8	94.0	1	2.98	1,325	0	98.2	1	2.53	12,687	2	98.7	2	2.62	49,867	2	99.7	1
2.57	62,575	1.9	88.2	1	2.52	20,472	3	94.7	1	3.36	125,400	1.8	100.0	1	2.54	12,687	2	98.0	1	2.75	74,263	3	100.0	1
2.59	71,061	1.2	89.4	1	2.61	299,043	4.8	98.2	1	.....	.....	.....	.....	.....	2.66	12,850	3	98.0	1	2.91	8,810	0	100.0	1
2.59	57,680	1.0	90.4	1	2.69	7,402	1	98.8	1	.....	.....	.....	.....	.....	2.69	19,880	7	100.0	1	.....	.....	.....	.....	.....
2.61	11,988	1.2	90.6	1	2.70	2,247	0	98.8	1	.....	.....	.....	.....	.....	2.71	41,284	7	100.0	1	.....	.....	.....	.....	.....
2.62	60,676	1.0	91.6	1	2.77	1,615	0	98.8	1	.....	.....	.....	.....	.....	3.23	1,825	0	100.0	1	.....	.....	.....	.....	.....
2.66	370,028	6.3	97.9	2	2.88	14,485	2	100.0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.73	44,794	8	98.7	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.74	25,069	4	99.1	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.80	18,673	3	99.4	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.91	20,500	3	99.7	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.93	9,293	1	99.8	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3.02	2,600	1	99.9	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
3.16	5,685	1	100.0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
2.38	5,861,683	100.0	100.0	92	2.36	6,276,845	100.0	100.0	92	2.31	6,992,363	100.0	100.0	92	2.28	6,049,923	100.0	100.0	92	2.33	25,180,216	100.0	100.0	92

TABLE 66.—Total "Revised" labor cost, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in Brazil-Block District of the State of Indiana.

January-March, 1918, inclusive.						April-June, 1918, inclusive.						July-September, 1918, inclusive.						October-December, 1918, inclusive.						Year 1918.					
Per ton cost by \$0.01 groupings.	Production (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons.)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
\$1.00	25,304	15.9	15.9	1	\$0.86	25,935	14.5	14.5	1	\$1.04	19,680	10.8	10.8	1	\$1.23	28,608	20.2	20.2	1	\$1.23	75,325	11.5	11.5	1	\$1.17	653,739	100.0	100.0	10
1.09	20,578	13.0	28.9	1	1.06	20,554	11.5	26.0	1	1.20	18,928	10.3	21.1	1	1.72	7,991	6.1	26.3	1	1.25	54,856	8.4	19.9	1	1.87	61,080	9.3	84.2	1
1.51	13,306	8.3	37.2	1	1.61	23,955	13.4	39.4	1	1.22	12,751	7.0	28.1	1	1.89	6,368	4.5	31.1	1	1.56	103,024	15.8	35.7	1	2.01	56,795	8.7	93.5	1
1.83	8,327	5.2	42.4	1	1.70	10,634	5.9	45.3	1	1.87	15,063	8.2	36.3	1	2.02	16,227	12.3	43.4	1	1.69	46,190	6.9	42.6	1	2.09	134,136	20.5	75.3	1
1.90	6,631	4.2	46.6	1	1.94	17,466	4.2	49.5	1	1.94	7,742	4.3	40.6	1	2.03	8,499	6.4	49.8	1	1.89	29,903	4.6	47.2	1	2.13	61,080	9.3	98.5	1
2.02	37,333	23.3	69.9	1	1.95	14,190	7.9	57.4	1	1.97	27,065	14.8	55.4	1	2.08	9,694	7.3	57.1	1	2.01	50,741	7.8	55.0	1	2.31	42,696	6.5	100.0	1
2.12	12,301	7.7	77.6	1	2.03	36,013	20.1	77.5	1	2.06	35,584	19.5	74.9	1	2.17	9,190	7.0	64.1	1	2.09	134,136	20.5	75.3	1	2.33	42,696	6.5	100.0	1
2.18	9,164	6.7	83.3	1	2.14	13,237	7.4	84.9	1	2.21	18,167	9.9	84.8	1	2.31	25,206	10.1	83.2	1	2.13	56,795	8.7	84.2	1	2.33	42,696	6.5	100.0	1
2.33	15,706	9.8	93.1	1	2.27	15,691	8.7	93.6	1	2.31	16,937	9.3	94.1	1	2.35	12,746	9.7	92.9	1	2.31	61,080	9.3	93.5	1	2.33	42,696	6.5	100.0	1
2.86	11,066	6.9	100.0	1	2.78	11,438	6.4	100.0	1	2.89	10,811	5.9	100.0	1	2.85	9,371	7.1	100.0	1	2.83	42,696	6.5	100.0	1	2.83	42,696	6.5	100.0	1
1.79	160,108	100.0	100.0	10	1.74	179,113	100.0	100.0	10	1.89	182,628	100.0	100.0	10	2.11	131,890	100.0	100.0	10	1.87	653,739	100.0	100.0	10	1.87	653,739	100.0	100.0	10

TABLE 67.—Total "Revised" supply cost, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in Brazil-Block District of the State of Indiana.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.									
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.																				
\$0.14	12,301	7.7	7.7	1	\$0.08	14,190	7.9	7.9	1	\$0.12	43,326	23.8	23.8	2	\$0.10	6,368	4.8	4.8	1	\$0.14	50,744	7.8	7.8	7.8	1	\$0.14	50,744	7.8	7.8	1																			
.18	37,533	23.3	31.0	1	.17	36,013	26.0	32.0	1	.14	15,063	8.2	32.0	1	.24	35,101	26.6	31.4	3	.17	134,136	20.5	28.3	28.3	1	.27	134,136	20.5	28.3	1																			
.19	9,164	5.7	36.7	1	.15	29,985	14.5	42.5	1	.23	12,751	7.0	44.9	1	.25	26,206	19.1	50.5	1	.23	78,825	11.5	39.8	39.8	1	.25	78,825	11.5	39.8	1																			
.23	25,076	13.0	46.5	1	.18	35,393	19.8	62.3	1	.24	10,181	5.9	49.9	1	.28	9,371	7.1	57.6	1	.25	42,686	6.5	46.3	46.3	1	.25	42,686	6.5	46.3	1																			
.25	30,618	16.9	63.4	1	.23	30,544	11.5	73.8	1	.28	16,987	9.3	64.2	1	.40	12,746	9.7	67.3	1	.28	29,903	4.9	50.9	50.9	1	.28	29,903	4.9	50.9	1																			
.31	11,069	6.9	80.3	1	.25	7,466	4.2	78.0	1	.31	18,327	10.3	74.4	1	.59	8,489	6.4	83.9	1	.28	56,755	8.7	59.0	59.0	1	.28	56,755	8.7	59.0	1																			
.36	25,366	15.9	96.2	1	.26	15,691	8.7	86.7	1	.31	15,167	9.9	84.4	1	.68	26,603	20.2	93.9	1	.28	61,080	8.4	68.9	68.9	1	.28	61,080	8.4	68.9	1																			
.37	6,631	4.2	94.8	1	.30	13,267	7.4	94.1	1	.32	19,660	10.8	85.2	1	.66	7,991	6.1	100.0	1	.34	54,866	8.4	77.3	77.3	1	.34	54,866	8.4	77.3	1																			
.40	13,906	8.3	94.8	1	.33	10,694	5.9	100.0	1	.49	27,065	14.8	100.0	1	.68	7,991	6.1	100.0	1	.37	43,190	6.9	84.2	84.2	1	.37	43,190	6.9	84.2	1																			
.51	8,327	5.2	100.0	1	.49	10,694	5.9	100.0	1	.49	27,065	14.8	100.0	1	.68	7,991	6.1	100.0	1	.43	103,024	15.8	100.0	100.0	1	.43	103,024	15.8	100.0	1																			
.27	160,108	100.0	100.0	10	.20	179,113	100.0	100.0	10	.26	182,623	100.0	100.0	10	.39	131,860	100.0	100.0	10	.27	663,793	100.0	100.0	100.0	10	.27	663,793	100.0	100.0	10																			



TABLE 69.—Total "Revised" f. o. b. mine cost, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in Brazil-Block District of the State of Indiana.

January-March, 1918, inclusive.					April-June, 1918, inclusive.					July-September, 1918, inclusive.					October-December, 1918, inclusive.					Year 1918.				
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
1.66	20,878	13.0	13.0	1	\$1.38	25,935	14.5	14.5	1	\$1.72	19,680	10.8	10.8	1	\$2.26	6,368	4.8	4.8	1	\$1.80	75,325	11.5	11.5	1
1.84	23,396	15.9	28.9	1	1.66	20,554	11.5	26.0	1	1.90	18,828	10.3	21.1	1	2.70	9,190	7.0	11.8	1	2.06	54,856	8.4	19.9	1
2.49	37,333	23.3	52.2	1	2.28	14,190	7.9	33.9	1	2.25	15,063	8.2	29.3	1	2.74	9,190	7.0	12.3	1	2.40	50,744	7.8	27.7	1
2.50	12,301	7.7	59.9	1	2.48	36,013	20.1	54.0	1	2.31	7,742	4.3	33.6	1	2.92	26,608	20.2	24.4	1	2.45	29,903	4.6	32.3	1
2.53	13,306	8.3	68.2	1	2.53	7,496	4.2	58.2	1	2.49	25,594	19.5	53.1	1	3.01	9,684	7.3	51.6	1	2.59	134,136	20.5	52.8	1
2.67	8,327	6.2	73.4	1	2.55	23,955	13.4	71.6	1	2.52	12,751	7.0	60.1	1	3.05	25,205	19.1	70.7	1	2.63	103,024	15.8	68.6	1
2.93	15,706	9.8	83.2	1	2.71	10,634	5.9	77.5	1	2.94	18,167	9.9	79.3	1	3.07	7,991	6.1	76.8	1	2.74	45,190	6.9	75.5	1
3.01	9,164	6.7	89.9	1	2.92	13,237	7.4	84.9	1	2.96	16,937	9.3	94.3	1	3.22	12,746	9.7	86.5	1	2.89	56,795	8.7	84.2	1
3.13	6,031	4.2	93.1	1	2.94	15,591	8.7	93.6	1	3.16	27,065	14.8	100.0	1	3.42	8,499	6.4	92.9	1	3.00	61,080	9.3	93.5	1
3.43	11,066	6.9	100.0	1	3.21	11,438	6.4	100.0	1	3.39	10,811	5.9	100.0	1	3.82	9,371	7.1	100.0	1	3.45	42,686	6.5	100.0	1
2.46	160,108	100.0	100.0	10	2.35	179,113	100.0	100.0	10	2.56	182,628	100.0	100.0	10	3.03	131,860	100.0	100.0	10	2.57	653,739	100.0	100.0	10



TABLE 70.—Total sales realization, by quarterly and yearly periods for 1918, for 10 operators producing bituminous coal in Brazil-Block District of the State of Indiana.

January-March, 1918, inclusive.					April-June, 1918, inclusive.					July-September, 1918, inclusive.					October-December, 1918, inclusive.					Year 1918.				
Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01	Per ton by \$0.01	Sales tonnage (net)	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01
\$2.56	25,396	15.9	15.9	1	\$2.42	20,554	11.5	11.5	1	\$2.49	7,742	4.3	4.3	1	\$2.55	6,368	4.8	4.8	1	\$2.57	54,866	8.4	8.4	1
2.57	9,631	4.2	20.1	1	2.76	7,466	4.2	15.7	1	2.65	19,680	10.8	15.1	1	2.65	16,221	12.3	17.1	1	2.71	29,903	4.6	13.0	1
2.96	9,164	4.7	25.8	1	2.77	23,935	13.4	28.1	1	2.88	18,167	9.9	28.0	1	2.78	7,991	6.1	23.2	1	2.83	56,748	8.7	21.7	1
3.00	8,327	3.2	31.0	1	2.94	13,196	7.4	36.5	1	3.10	37,065	14.8	39.8	1	2.97	9,684	7.3	30.7	1	2.99	103,094	16.8	37.5	1
3.11	37,333	23.2	54.3	1	3.16	10,634	6.9	42.4	1	3.21	35,684	19.5	59.3	1	3.02	26,608	20.2	50.7	1	3.17	134,130	20.5	53.0	1
3.16	12,301	7.7	62.0	1	3.17	61,948	34.6	77.0	2	3.22	18,628	10.3	69.6	1	3.22	26,206	19.1	69.8	1	3.18	75,325	11.5	69.5	1
3.23	13,806	8.3	70.3	1	3.27	14,190	7.9	84.9	1	3.26	16,063	8.2	77.8	1	3.31	9,190	7.0	76.8	1	3.25	50,744	7.8	77.3	1
3.24	20,878	13.0	83.3	1	3.39	11,438	6.4	91.3	1	3.38	10,811	6.9	83.7	1	3.40	9,371	7.1	83.9	1	3.33	45,190	6.9	84.2	1
3.36	11,066	6.9	90.2	1	3.42	15,674	8.7	100.0	2	3.46	26,729	16.3	100.0	2	3.47	12,742	9.7	93.6	1	3.38	42,688	6.5	90.7	1
3.38	15,703	9.8	100.0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.48	8,499	6.4	100.0	1	3.43	61,097	9.3	100.0	1
3.06	180,105	100.0	100.0	10	3.04	179,065	100.0	100.0	10	3.13	182,969	100.0	100.0	10	3.09	131,880	100.0	100.0	10	3.08	683,709	100.0	100.0	10

TABLE 71.—"Claimed" labor, supplies, general expenses, and total f. o. b. mine cost for the year 1918, for 98 operators producing bituminous coal in District No. 1 of the State of Indiana.

Labor cost.						Supply cost.						General expenses.						Total f. o. b. mine cost.					
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.		Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.		Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.		Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
30.87	12,088	0.1	0.1	1		30.00	322,835	1.3	1.3	2		30.05	66,337	0.3	0.3	1		\$1.31	66,337	0.3	0.3	1	
1.97	72,660	5.3	5.7	2		.07	128,236	.5	1.8	1		.13	70,697	.3	11.7	2		1.44	325,597	1.3	1.6	1	
1.08	197,080	8.8	6.5	2		.08	86,053	.3	2.1	1		.14	2,847,267	11.1	11.7	2		1.53	12,407	5.0	6.6	3	
1.10	262,503	2.2	7.6	1		.11	15,835	1.1	3.3	2		.15	12,407	1.8	13.5	1		1.55	261,426	1.1	7.7	1	
1.13	673,480	5.1	9.8	1		.13	301,448	.9	4.2	1		.16	469,086	1.3	14.7	2		1.57	232,503	5.1	12.8	2	
1.17	322,708	2.2	14.9	1		.14	228,700	.9	4.3	1		.17	313,764	1.2	16.0	1		1.62	1,300,052	2.3	15.0	2	
1.18	489,331	1.9	16.8	1		.15	18,064	4.5	8.8	1		.18	325,697	1.3	16.4	1		1.64	573,480	9	15.9	3	
1.19	126,286	2.6	17.3	1		.16	1,182,919	.9	9.7	1		.20	110,265	.4	22.3	6		1.65	228,700	2.6	16.2	1	
1.21	676,284	2.6	16.9	1		.17	2,803,358	10.9	20.6	4		.21	511,764	5.9	22.3	3		1.66	72,660	3	16.2	1	
1.23	186,830	2.6	17.3	1		.18	81,055	.3	20.9	4		.22	217,776	1.8	24.1	3		1.67	676,284	2.6	18.8	1	
1.24	305,510	1.2	21.8	1		.19	3,801,854	14.8	35.7	6		.23	2,174,776	8.4	32.5	6		1.70	556,832	2.1	20.9	2	
1.25	175,060	2.0	24.5	1		.20	1,032,660	4.1	40.8	2		.24	428,140	1.7	40.4	5		1.73	291,532	2.1	23.0	2	
1.26	517,000	2.1	26.8	1		.21	252,668	2.6	42.3	2		.25	381,855	1.4	43.5	2		1.74	1,187,537	4.6	28.7	2	
1.27	533,533	2.1	28.0	1		.22	378,045	1.5	42.3	2		.26	1,617,313	6.4	49.9	7		1.75	99,459	4	29.1	1	
1.29	725,539	2.8	31.2	2		.23	669,275	2.6	44.9	2		.27	81,615	1.9	51.8	2		1.76	206,980	8	30.7	1	
1.30	464,502	1.8	31.2	2		.24	810,957	3.1	48.0	2		.28	5,609,283	21.4	73.2	6		1.77	142,070	6	30.7	1	
1.31	829,941	7.2	38.4	4		.25	2,942,620	11.5	59.5	2		.29	277,189	1.0	74.2	2		1.78	798,107	7.0	37.5	1	
1.33	153,423	1.7	39.0	4		.26	833,558	3.3	62.8	3		.30	541,241	2.1	77.0	2		1.79	261,041	1.0	38.8	1	
1.34	435,251	1.6	40.7	2		.27	346,700	1.9	65.0	3		.31	188,932	2.7	79.7	3		1.80	69,115	3	38.8	1	
1.35	459,767	1.8	42.5	2		.28	235,631	8.5	73.8	3		.32	683,389	3.6	80.3	1		1.81	18,654	1	43.1	2	
1.36	181,696	4.6	42.9	5		.29	191,543	2.8	76.6	3		.33	894,202	3.4	84.2	5		1.83	183,181	4.3	43.6	3	
1.37	184,329	4.6	47.3	5		.30	778,660	2.8	80.6	3		.34	123,311	2.1	86.3	2		1.84	760,532	3.0	46.6	3	
1.38	268,670	1.9	48.3	1		.31	733,539	4.0	83.5	3		.35	694,413	5.0	91.6	4		1.86	394,223	1.5	48.1	1	
1.40	81,055	.3	49.1	1		.32	1,037,794	12.9	94.1	1		.36	336,413	.3	91.6	2		1.88	77,189	1.3	48.4	1	
1.42	728,866	2.8	51.9	2		.33	333,043	.6	94.4	1		.37	300,147	.3	93.2	2		1.89	486,276	1.9	51.0	1	
1.44	1,083,266	4.3	56.2	2		.34	144,846	1.9	96.3	3		.38	1,72,660	.9	96.3	1		1.90	175,060	.7	51.0	1	
1.45	12,063,094	8.0	64.2	3		.41	479,665	1.9	96.3	3		.42	230,977	.7	96.3	2		1.91	182,573	.6	51.0	1	

TABLE 71.—“Claimed” labor, supplies, general expenses, and total f. o. b. mine cost for the year 1918, for 92 operators producing bituminous coal in District No. 1 of the State of Indiana—Continued.

Labor cost.					Supply cost.					General expenses.					Total f. o. b. mine cost.				
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
81.46	3,221,124	12.5	76.7	1	\$0.43	188,936	0.0	97.0	1	\$0.43	87,903	0.0	93.5	1	\$1.04	892,703	3.6	55.2	2
1.47	489,255	1.9	78.6	1	.44	8,489	.0	97.0	1	.46	8,810	.0	93.5	1	1.95	779,558	3.0	58.2	2
1.49	517,060	2.0	80.6	1	.45	36,934	.1	97.1	1	.47	114,628	.4	94.4	1	1.96	19,196	.1	58.3	1
1.50	66,348	.3	81.3	1	.46	292,492	1.1	98.2	2	.50	138,513	.5	94.4	2	1.97	163,422	.6	58.9	1
1.51	112,630	.4	81.3	1	.46	210,870	.8	99.0	1	.51	431,458	1.7	97.2	1	1.99	284,625	1.0	60.0	1
1.52	151,290	.6	81.3	1	.55	107,680	.3	99.8	1	.51	292,492	1.7	97.2	1	2.00	379,694	1.5	61.5	1
1.53	375,942	1.5	83.4	1	.68	46,636	.2	100.0	1	.56	197,680	.8	98.0	1	2.01	115,717	4.3	63.8	3
1.56	183,942	.7	84.0	1						.60	128,236	.5	98.5	1	2.03	114,628	1.1	67.3	2
1.57	198,246	.8	84.0	1						.70	188,636	.7	99.2	1	2.04	267,752	1.1	67.3	2
1.58	234,176	1.0	85.9	1						.79	36,934	.1	100.0	1	2.05	72,966	.9	67.6	1
1.59	35,692	.1	86.0	1						2.10	180,301	.7		1	2.06	254,516	1.6	68.5	2
1.60	516,131	2.0	88.7	1											2.07	408,082	1.6	70.1	2
1.61	174,115	.7	88.7	1											2.08	183,622	12.4	82.5	2
1.62	247,480	1.0	89.7	1											2.09	95,846	.4	82.9	1
1.65	415,931	1.6	91.3	1											2.10	180,301	.7	83.6	1
1.66	353,439	1.4	92.7	1											2.11	714,377	2.8	86.4	2
1.67	70,697	.3	93.0	1											2.13	342,866	1.4	87.8	2
1.68	246,416	1.0	94.0	1											2.15	335,948	1.3	89.1	2
1.69	300,608	1.2	95.2	1											2.17	17,299	.0	89.1	2
1.71	97,301	.4	95.6	1											2.18	97,301	.4	89.5	1
1.72	115,968	.4	96.0	1											2.19	75,200	.3	89.8	1
1.73	286,070	1.1	97.1	1											2.21	300,608	1.2	91.0	1
1.75	218,824	.8	97.9	1											2.22	73,875	.3	91.3	1
1.77	86,701	.3	98.2	1											2.23	197,080	.8	92.1	1
1.82	134,673	.5	98.7	1											2.24	636,787	2.4	94.5	3
1.84	86,839	.3	99.0	1											2.26	115,968	.4	94.9	1
1.89	49,436	.2	99.2	1											2.31	49,460	.2	95.1	1

[illegible]

**1 Included in labor cost.**

TABLE 72.—"Claimed" labor, supplies, general expenses and total f. o. b. mine cost for the year 1918, for 10 operators producing bituminous coal in Brazil-Block District of the State of Indiana.

Labor cost.					Supply cost.					General expenses.					Total f. o. b. mine cost.				
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
1.76	692,392	100.0	100.0	10	.40	692,392	100.0	100.0	10	.51	692,392	100.0	100.0	10	2.67	692,392	100.0	100.0	10
2.65	47,164	6.8	100.0	1	.62	111,390	16.1	100.0	1	.81	47,208	6.8	100.0	1	3.40	47,164	6.8	100.0	1
2.23	63,496	9.2	93.2	1	.49	142,216	20.5	83.9	2	.79	111,390	16.1	98.2	1	3.01	63,496	9.2	93.2	1
2.02	59,985	8.7	84.0	1	.48	47,208	6.8	63.4	1	.65	82,524	11.9	88.2	1	2.99	59,985	8.7	84.0	1
2.01	186,878	27.4	75.3	2	.42	59,985	8.7	56.6	1	.55	119,677	17.3	65.2	2	2.85	111,390	16.1	75.3	1
1.82	31,065	4.5	47.9	1	.39	63,496	9.2	47.9	1	.40	63,496	9.2	47.9	1	2.54	136,134	20.1	68.5	1
1.44	47,208	6.8	36.4	1	.38	47,164	6.8	38.7	1	.37	47,164	6.8	38.7	1	2.40	81,809	11.8	52.4	1
1.15	111,390	16.1	20.5	1	.32	31,065	4.5	27.4	1	.26	31,065	4.5	27.4	1	2.21	82,524	11.9	40.5	1
1.07	82,524	11.9	11.9	1	.14	50,744	7.3	7.3	1	.25	50,744	7.3	7.3	1	\$2.19	50,692	8.6	32.3	1



TABLE 74.—Total "Revised" supply cost, by quarterly and yearly periods for 1918, for 8 operators producing bituminous coal in the State of Michigan.

January-March, 1918, inclusive.					April-June, 1918, inclusive.					July-September, 1918, inclusive.					October-December, 1918, inclusive.					Year 1918.					
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
30.06	9,962	2.9	2.9	1	30.12	4,262	1.2	1.2	1	30.07	10,052	2.6	2.6	1	30.06	10,958	3.2	3.2	1	30.07	35,224	2.5	2.5	2.5	1
.40	109,667	32.4	35.3	1	.43	98,314	27.9	28.1	1	.42	5,251	1.4	4.0	1	.53	115,129	33.5	36.7	2	.48	447,263	31.5	34.0	34.0	1
.34	135,024	39.9	75.2	1	.45	25,034	7.2	37.3	1	.53	127,608	33.3	37.3	1	.53	116,129	33.5	38.7	2	.53	570,833	4.1	40.4	40.4	1
.51	54,826	16.2	91.4	2	.48	12,284	3.5	43.0	1	.46	21,688	5.7	43.0	1	.57	13,814	4.0	46.6	1	.55	57,620	6.7	44.5	44.5	1
.57	13,244	3.9	95.3	1	.56	14,934	4.2	44.0	1	.47	15,209	4.0	47.0	1	.75	139,043	40.5	87.1	1	.63	138,129	9.7	54.2	54.2	1
.58	13,663	4.0	99.3	1	.57	33,332	9.5	53.5	1	.60	41,309	10.8	57.8	1	.77	11,699	3.4	90.5	1	.64	598,583	42.3	96.5	96.5	2
.86	2,235	.7	100.0	1	.61	162,380	46.1	96.6	1	.77	146,979	36.1	96.9	1	.86	32,405	9.5	100.0	1	.65	49,376	3.5	100.0	100.0	1
					1.35	1,546	100.0	100.0	1		12,149	3.1	100.0	1											
.41	338,621	100.0	100.0	8	.51	352,136	100.0	100.0	8	.58	383,245	100.0	100.0	8	.64	343,385	100.0	100.0	8	.64	1,417,387	100.0	100.0	100.0	8

TABLE 75.—Total "Revised" general expenses, by quarterly and yearlay periods for 1918, for 8 operators producing bituminous coal in the State of Michigan.

January-March, 1918, inclusive.						April-June, 1918, inclusive.						July-September, 1918, inclusive.						October-December, 1918, inclusive.						Year 1918.						
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.		
50.23	135,024	39.9	39.9	1	30.22	30.22	162,380	46.1	46.1	1	30.22	30.22	10,032	2.6	2.6	1	30.21	30.21	30.24	621,660	43.9	43.9	1	30.24	30.24	621,660	43.9	43.9	2	
25.25	9,962	7.0	42.8	1	.30	.30	12,294	3.5	49.6	1	.25	.25	139,043	39.1	41.7	1	.25	.25	.33	49,376	8.5	47.4	1	.33	.33	49,376	8.5	47.4	1	
29.29	25,962	19.0	48.8	1	.31	.31	127,608	38.3	75.0	1	.28	.28	177,098	33.3	75.0	1	.38	.38	.36	148,472	10.5	89.4	2	.36	.36	148,472	10.5	89.4	2	
31.31	13,344	3.9	53.7	1	.34	.34	53,438	13.9	88.9	2	.36	.36	11,099	2.4	94.6	1	.40	.40	.44	138,129	9.7	99.1	1	.44	.44	138,129	9.7	99.1	1	
33.33	13,683	4.0	57.7	1	.42	.42	96,314	27.9	90.6	1	.36	.36	21,688	6.7	98.6	1	.46	.46	1.07	12,457	.9	100.0	1	1.07	1.07	12,457	.9	100.0	1	
37.37	106,667	32.4	90.1	1	1.03	1.03	15,209	4.0	98.6	1	1.07	1.07	20,337	5.9	100.0	1	1.26	1.26	.31	1,417,357	100.0	100.0	8	.31	.31	1,417,357	100.0	100.0	8	
75.75	2,235	.7	100.0	1	.....	.....	1,546	.4	100.0	1	.....	.....	5,251	1.4	100.0	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.32	338,621	100.0	100.0	8	.32	.32	352,136	100.0	100.0	8	.30	.30	383,245	100.0	100.0	8	.33	.33	.31	1,417,357	100.0	100.0	8	.31	.31	1,417,357	100.0	100.0	8	



TABLE 76.—Total "Revised" f. o. b. mine cost, by quarterly and yearly periods for 1918, for 8 operators producing bituminous coal in the State of Michigan.

January-March, 1918, inclusive.						April-June, 1918, inclusive.						July-September, 1918, inclusive.						October-December, 1918, inclusive.						Year 1918.						
Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	
32.82	109,537	32.4	32.4	1	32.88	25,034	7.2	7.2	1	32.87	127,608	33.3	33.3	1	32.86	10,958	3.2	3.2	1	32.02	538,145	37.9	37.9	37.9	2	32.02	538,145	37.9	37.9	2
2.97	23,793	7.0	39.4	1	3.07	260,694	74.0	81.2	1	3.05	21,688	5.7	39.0	1	3.22	111,707	32.5	35.7	1	3.39	590,426	41.4	79.3	41.4	1	3.39	590,426	41.4	79.3	1
3.41	9,962	2.9	42.3	1	3.43	14,934	4.2	85.4	1	3.36	5,251	1.4	40.4	1	3.36	101,337	6.9	41.6	1	3.53	57,620	4.1	83.4	4.1	1	3.53	57,620	4.1	83.4	1
3.52	13,663	4.0	46.3	1	4.08	17,546	3.4	85.8	1	3.40	149,979	39.1	49.5	1	3.48	139,043	40.5	82.1	1	3.60	35,234	2.5	85.9	2.5	1	3.60	35,234	2.5	85.9	1
3.68	135,024	39.9	86.2	1	4.19	12,284	3.5	89.3	1	3.41	149,979	4.0	83.5	1	3.76	13,814	4.0	86.1	1	3.87	12,457	0.9	86.8	0.9	1	3.87	12,457	0.9	86.8	1
4.16	2,235	0.6	86.9	1	4.25	35,353	9.5	96.8	1	3.99	51,861	13.4	96.9	2	4.34	3,425	1.0	87.1	1	4.36	136,129	9.7	96.6	9.7	1	4.36	136,129	9.7	96.6	1
4.33	13,244	3.9	90.8	1	5.01	4,262	1.2	100.0	1	5.12	12,149	3.1	100.0	1	4.86	32,405	9.5	96.6	1	4.75	49,376	3.5	100.0	3.5	1	4.75	49,376	3.5	100.0	1
4.39	31,033	9.2	100.0	1																										
3.42	338,621	100.0	100.0	8	3.25	352,136	100.0	100.0	8	3.37	353,245	100.0	100.0	8	3.59	343,885	100.0	100.0	8	3.41	1,417,387	100.0	100.0	100.0	8	3.41	1,417,387	100.0	100.0	8

TABLE 77.—Total sales realization, by quarterly and yearly periods for 1918, for 8 operators producing bituminous coal in the State of Michigan.

January-March, 1918, inclusive.										April-June, 1918, inclusive.										July-September, 1918, inclusive.										October-December, 1918, inclusive.										Year 1918.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Per ton by \$0.01		Sales tonnage (net groups).		Per cent of total.		Accumulated per cent.		Number of operators by \$0.01		Per ton by \$0.01		Sales tonnage (net groups).		Per cent of total.		Accumulated per cent.		Number of operators by \$0.01		Per ton by \$0.01		Sales tonnage (net groups).		Per cent of total.		Accumulated per cent.		Number of operators by \$0.01		Per ton by \$0.01		Sales tonnage (net groups).		Per cent of total.		Accumulated per cent.		Number of operators by \$0.01																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
33.01	135,024	39.9	39.9	39.9	39.9	1	1	1	1	33.85	102,390	46.1	46.1	46.1	46.1	1	1	1	1	33.95	149,979	39.1	39.1	39.1	39.1	39.1	39.1	1	1	1	1	33.88	139,043	40.5	40.5	40.5	40.5	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41.4	41.4	41.4	41.4	1	1	1	1	33.83	593,426	41

TABLE 78.—"Claimed" labor, supplies, general expenses, and total f. o. b. mine cost for the year 1918, for 8 operators producing bituminous coal in the State of Michigan.

Labor cost.					Supply cost.					General expenses.					Total f. o. b. mine cost.				
Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.	Per ton cost by \$0.01 groupings.	Production tonnage (net tons).	Per cent of total.	Accumulated per cent.	Number of operators by \$0.01 groupings.
2.06	494,006	32.0	32.0	1	\$0.30	37,542	2.4	2.4	1	\$0.37	56,380	3.8	3.8	1	\$3.12	494,006	32.0	32.0	1
2.12	14,944	1.0	33.0	1	.58	625,451	40.6	42.9	1	.39	93,780	6.1	9.8	1	3.35	93,780	6.1	38.1	1
2.36	93,780	6.1	39.1	1	.66	494,006	32.0	74.9	1	.40	494,006	32.0	41.9	1	3.62	61,127	4.0	42.1	1
2.47	61,127	4.0	79.6	1	.73	61,127	4.0	78.9	1	.42	61,127	4.0	45.9	1	3.64	625,451	40.5	82.6	1
2.68	37,542	2.4	83.6	1	.83	93,780	6.1	85.0	1	.49	37,542	2.4	48.3	1	3.88	37,542	2.4	85.0	1
3.09	157,374	10.2	93.8	1	.97	157,374	10.2	95.2	1	.53	157,374	10.2	58.5	1	4.36	14,944	1.0	86.0	1
3.19	56,380	3.8	100.0	1	1.01	56,380	3.8	98.0	1	.70	625,451	40.5	99.0	1	4.38	157,374	10.2	96.2	1
					1.26	14,944	1.0	100.0	1	1.03	14,944	1.0	100.0	1	4.57	56,380	3.8	100.0	1
2.35	1,542,604	100.0	100.0	8	.69	1,542,604	100.0	100.0	8	.54	1,542,604	100.0	100.0	8	3.56	1,542,604	100.0	100.0	8









